| INPUT     Connectors       Trequency     10 MHz       Lavel     #7 dBm 46 dB into 50 ohms       0/UTPUT     Frequency       240 MHz     Bit Statuto Unput: SMA(f)       240 MHz     Packaging       Lavel     Packaging       1 x 10 <sup>6</sup> first year     Discover Monitoring: Feed Thru Terminals       5 x 10 <sup>6</sup> first year     Statutoring Threaded inserts on base, 0       3 dim 2 dB into 50 ohms     Power, Xeata       1 x 10 <sup>6</sup> first year     Statutoring Threaded inserts on base, 0       3 triangle first year     Statutoring Threaded inserts on base, 0       3 triangle year threader, typical     Threaded inserts on base, 0       1 NKet-jelated machined     Statutoring Threaded inserts on base, 0       1 x 10 <sup>6</sup> first year     Statutoring Threaded inserts on base, 0       3 triangle year threader, typical     Threaded inserts on base, 0       1 NKet-jelated machined     Statutoring Threaded inserts on base, 0       1 Note is places. #26.60     Statutoring Threaded inserts on base, 0       1 Note is places. #26.60     Statutoring Threaded inserts on base, 0       1 Note is places. #26.60     Statutoring Threaded inserts on base, 0       1 Note is places. #26.60     Statutoring Threaded inserts on base, 0       1 Note is place.     Statutoring Threaded inserts on base, 0       1 Notkel-jelate indicitii     Statutoring Threaded i                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                   |                                               | REV            | DATE         |                      | REVISION RECORD     |            | DWN             | AUTH       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|----------------|--------------|----------------------|---------------------|------------|-----------------|------------|
| Frequency<br>10 MHz<br>Level<br>+7 dBm 64 dB into 50 ohms<br>OUTPUT<br>240 MHz<br>Level<br>+3 dBm 12 dB into 50 ohms<br>OUTPUT<br>240 MHz<br>Level<br>+13 dBm 12 dB into 50 ohms<br>STABILITY<br>Aging (free-running)<br>1x 10 <sup>6</sup> first year<br>after 30 days operating, typical<br>3x 10 <sup>7</sup> per year thereafter, typical<br>11 KHz<br>-145 dBoHz<br>10 KHz<br>-145 dBoHz<br>10 KHz<br>-145 dBoHz<br>10 KHz<br>-167 dBoHz<br>20 dBc, excluding power<br>supply inere-running from 0 to +70°C<br>(Ref +25°C)<br>Harmonics<br>-70 dBc<br>Phase Lock Voltage Monitor<br>Voltage molecular thereafter, typical<br>-70 dBc<br>Phase Lock Voltage Monitor<br>Voltage molecular thereafter, typical<br>-15 WDT 2-156 dBoHz<br>-70 dBc<br>Phase Lock Voltage Monitor<br>Voltage molecular thereafter, typical<br>-70 dBc<br>Phase Lock Voltage Monitor<br>Voltage molecular thereafter, typical<br>-35 WBH MCO-PLD<br>-12 VDC<br>Bena H - Date Code<br>(Mark connectors with function)<br>-70 dBc<br>-70 dBc<br>Phase Lock Voltage Monitor<br>Voltage molecular thereafter, typical<br>-36 dBc, excluding power<br>supply inter exited space<br>-70 dBc<br>Phase Lock Voltage Monitor<br>Voltage molecular thereafter, typical<br>-5 Wer – Warm-up and Total<br>-6 Wer – Warm-up and Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | INPUT                                             | Connectors                                    | -              |              | Initial Release      |                     |            |                 |            |
| 10 MHz       Power, Monitoring: Feed Thru Terminals         47 dBm 46 dB into 50 ohms       OUTPUT         74 dBm 46 dB into 50 ohms       OUTPUT         74 dBm 46 dB into 50 ohms       Micke-Jalaed machined         84 MHz       Power, Monitoring: Feed Thru Terminals         10 MHz       Power, Monitoring: Feed Thru Terminals         240 MHz       Power, Monitoring: Feed Thru Terminals         11 Micke-Jalaed machined       aluminum housing – J1P         Mounting       Thrue Terminals         12 MHz       Power         13 x 10 <sup>6</sup> first year       False Sole         100 Hz       -114 dBG/Hz         100 KHz       -112 MKL Sc-cut (x2)         (Ref. +28°C)       Type 2 Loop         200 GBC, excluding power       -50 GBC         30 Harmonics       -0 Uput I Level         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                   |                                               |                |              |                      |                     |            | _               |            |
| Level<br>+7 dB m dB into 50 ohms<br>OUTPUT<br>Prequency<br>240 MHz<br>Level<br>+13 dBm ±2 dB into 50 ohms<br>STABILITY<br>Aging (free-running)<br>1 x 10 <sup>6</sup> first year<br>1 x 10 <sup>7</sup> second year, typical<br>3 x 10 <sup>7</sup> peccend year, typical<br>1 x 10 <sup>6</sup> first year<br>1 x 10 <sup>7</sup> first year<br>1 x 10 <sup>6</sup> first year<br>1 x 10 <sup>6</sup> first year<br>1 x 10 <sup>7</sup> first year<br>1 x 10 <sup>6</sup> first year<br>1 x 10 <sup>7</sup> first year<br>2 year<br>1 x 10 <sup>7</sup> first year<br>1 year | • •                                               |                                               |                |              |                      |                     |            |                 |            |
| +7-dbm ±6 dB into 50 ohms       Packaging         OUTPUT       Nickel-plated machined<br>aluminum housing – J1P         Yado MHz       Threaded inserts on base,<br>6 piaces x2-56         YABM 12 dB into 50 ohms       For Power         STABILITY       Threaded inserts on base,<br>6 piaces x2-56         POWER REQUIREMENTS       Warm_Jp Power         x 10 <sup>3</sup> first year       attr 30 days operating, typical<br>3 x 10 <sup>3</sup> per year threather, typical<br>3 x 10 <sup>3</sup> per year threather, typical<br>10 Hz       -144 dBc/Hz         Tobal Power       -5 Watts for 5 minutes<br>12 VDC 25%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                   |                                               |                |              |                      |                     |            |                 |            |
| OUTPUT<br>Frequency<br>240 MHz       Nickel-plated machined<br>aluminum housing – J1P         Level       +13 dBm ±2 dB into 50 ohms         *13 dBm ±2 dB into 50 ohms       6 places, #2-56         STABILITY       Power RecOurReMENTS         Aging (free-running)       1 x 10 <sup>5</sup> first year         3 x 10 <sup>-</sup> gescond year, typical       5 Watts for 5 minutes         Total Power       5 X 90 <sup>-</sup> year threader, typical         100 Hz       -114 dBcHz         100 Hz       -107 dBcHz         100 KHz       -168 dBcHz         Temperature Stability       Target Bandwidth: ≤ 60 Hz         Tog       Target Bandwidth: ≤ 60 Hz         Tog       120 MHz SC-cut (x2)         OHHz       220 MHz SC-cut (x2)         OHHz SC-cut (x2)       OHHz SC-cut (x2)         OHz       -100 KHz         -26 dBc       -20 dBc         Sub-Harmonics       -70 dBc         -9 base Lock Voltage Monitor       -9 base Noise C free-running         -9 base Lock Voltage Monitor       -9 base Noise C, free-running         -9 base Lock Voltage Monitor       -9 base Noise C, free-running         -9 base Lock Voltage Monitor       -9 base Noise C, free-running         -9 base Lock Voltage Monitor       -9 base Noise C, free-running         -9 base                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                   |                                               |                |              |                      |                     |            |                 |            |
| Frequency<br>240 MHz       aluminum housing11P         Level       Mounting         +13 dBm +2 dB into 50 ohms       Threaded inserts on base,<br>6 piaces, #2-56         STABILITY       Formation 1         Aging (free-running)       1 × 10 <sup>5</sup> first year         after 30 days operating, typical       5 Watts of 5 minutes         5 × 10 <sup>5</sup> per year thereafter, typical       5 Watts at +25°C         Supply Votage       +12 VDC 45%         ADUSTMENT       Cop BWer         100 Hz       -114 dBcHz         10 KHz       -164 dBcHz         10 KHz       -164 dBcHz         10 KHz       -168 dBcHz         Temperature Stability       Target Bandwidth: \$ 60 Hz         70 dBc       Type 2 Loop         CRF : #25°C)       CHYSTAL         Type 32 dBc       Sol 2503 (Current Rev.)         240 MHz Mz Monets       Sol 2503 (Current Rev.)         240 MHz Miz Monets       -10 dBcHz         The Total Power       Serial # - Date Code         Spurious       -90 dev         -70 dBc       -90 dev         Spurious       -90 dev         -70 dBc       -90 dev         -70 dBc       -90 dev         -70 dBc       -90 dev                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |                                               |                |              |                      |                     |            |                 |            |
| 240 MHz       Mounting         Level       +13 dBm +2 dB into 50 ohms         57 ABILTY       Aging (free-running)         1 x 10 <sup>5</sup> first year       5 x 10 <sup>7</sup> second year, typical         3 x 10 <sup>7</sup> by rear therafter 30 dBc/Hz       Total Power         2 X 10 <sup>7</sup> by rear therafter 1ypical       5 x 10 <sup>7</sup> thee-running)         100 Hz       -144 dBc/Hz         100 Hz       -146 dBc/Hz         100 Hz       -168 dBc/Hz         100 KHz       -168 dBc/Hz         Trigget Bandwidth: ≤ 60 Hz       Type 2 Loop         100 KHz       -168 dBc/Hz         100 KHz       -162 dBc/Hz         100 KHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |                                               |                |              |                      |                     |            |                 |            |
| Level<br>+13 dBm iz 2dB into 50 ohms<br>STABILITY<br>Aging (free-running)<br>1x 10 <sup>6</sup> first year<br>after 30 days operating, typical<br>5x 10 <sup>7</sup> per year thereafter, typical<br>100 KHz - 114 dBcHz<br>100 KHz - 114 dBcHz<br>100 KHz - 114 dBcHz<br>100 KHz - 114 dBcHz<br>100 KHz - 167 dBcHz<br>100 KHz - 167 dBcHz<br>100 KHz - 167 dBcHz<br>100 KHz - 167 dBcHz<br>120 MHz SC-cut (x2)<br>CRYSTAL<br>-25 dBc<br>Sub-Harmonics<br>-70 dBc<br>Phase Lock Alam<br>TTL<br>Locked +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (L0)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1 <sup>7</sup><br>Tage Data Structure and the set of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |                                               |                |              |                      |                     |            |                 |            |
| <ul> <li>+13 dBm ±2 dB into 50 ohms</li> <li>6 places, #2-56</li> <li>POWER REQUIREMENTS</li> <li>Warm-Up Power</li> <li>× 10<sup>5</sup> first year</li> <li>after 30 days operating, typical</li> <li>5 x 10<sup>7</sup> second year, typical</li> <li>3 x 10<sup>7</sup> per year threafter, typical</li> <li>100 Hz</li> <li>-114 dBcHz</li> <li>100 Hz</li> <li>-145 dBcHz</li> <li>100 Hz</li> <li>-16 dBcHz</li> <li>Temperature Stability</li> <li>±5 x 10<sup>7</sup> tree-running from 0 to +70°C</li> <li>(Ref. +25°C)</li> <li>240 MHz SC-cut (x2)</li> <li>OTHER</li> <li>240 MHz SC-cut (x2)</li> <li>OTHER</li> <li>240 MHz MXO-PLD</li> <li>+12 VDC</li> <li>501-29503 (Current Rev.)</li> <li>240 MHz MXO-PLD</li> <li>+12 VDC</li> <li>501-29503 (Current Rev.)</li> <li>240 MHz MXO-PLD</li> <li>+12 VDC</li> <li>Serial # - Date Code</li> <li>(Marconics</li> <li>-70 dBc</li> <li>-70 dBc</li> <li>Phase Lock Alarm</li> <li>TIL</li> <li>Locked: +3.5 VDC to +5.2 VDC (Hi)</li> <li>Ottof-Lock: +0.8 VDC max (L0)</li> <li>Phase Lock Alarm</li> <li>TIL</li> <li>Locked: +3.5 VDC to +5.2 VDC (Hi)</li> <li>Ottof-Lock: +0.8 VDC max (L0)</li> <li>Phase Lock Voltage monitor</li> <li>voltage monitor pin supplied</li> <li>MECHANICAL</li> <li>Dimensions</li> <li>3.45 x 4 x 1°</li> <li>Wenzel Associates, Inc.</li> <li>Marmonics</li> <li>-Power – Warm-up and Total</li> <li>Wenzel Associates, Inc.</li> <li>Marmonics</li> <li>-Power – Warm-up and Total</li> <li>Wenzel Associates, Inc.</li> <li>Marmonics</li> <li>-Power – Warm-up and Total</li> <li>Wenzel Associates, Inc.</li> <li>Marmonics</li> <li>-Power – Warm-up and Total</li> <li>Wenzel Associates, Inc.</li> <li>Marmonics</li> <li>-Power – Warm-up and Total</li> <li>Wenzel Associates, Inc.</li> <li>-Wenzel Associates, Inc.</li> <li></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                   |                                               |                |              |                      | 11P MYO Connections |            |                 |            |
| STABLITY       POWER REQUIREMENTS         Aging (free-running)       1x 10 <sup>4</sup> first year         after 30 days operating, typical       5.7.5 Watts for 5 minutes         5 x 10 <sup>7</sup> second year, typical       5.7.5 Watts for 5 minutes         7 total Power       5.8.10 <sup>7</sup> second year, typical         9 hase Noise L(1), typical (free-running)       100 Hz         100 Hz       -114 dBOHz         11K tz       -145 dBOHz         100 KHz       -168 dBOHz         120 MHz SC-cut (x2)       OTHER         120 MHz SC-cut (x2)       OTHER         120 MHz MSO-PLD       -114 dBOHz         -70 dBC       -230 dC         Phase Lock Alarm       -0 utput Level         -0 utput Level       -0 utput Level         -0 utput Level       -0 utput Level         -0 utput Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                   |                                               |                |              |                      |                     | ,          |                 |            |
| Aging (free-running)<br>1 x 10 <sup>6</sup> first year<br>after 30 days operating, typical<br>5 x 10 <sup>7</sup> second year, typical<br>3 x 10 <sup>7</sup> per year thereafter, typical<br>Phase Noise L(f), typical, (free-running)<br>100 Hz - 114 dBc/Hz<br>10 KHz - 145 dBc/Hz<br>10 KHz - 168 dBc/Hz<br>10 KHz - 168 dBc/Hz<br>10 KHz - 168 dBc/Hz<br>10 KHz - 168 dBc/Hz<br>12 MHz St 10 <sup>7</sup> free-running from 0 to +70°C<br>(Ref. +25°C)       WarmUp Power<br>5 Watts at +25°C<br>Supply Voitage<br>+12 VDC 45%<br>ADUSTMENT<br>Loop BW<br>Target Bandwidth: \$ 60 Hz<br>Type 2 Loop<br>CRYSTAL<br>Type 2 Loop                                                                                                                                                                                                                                                              |                                                   |                                               |                |              |                      |                     |            |                 |            |
| <ul> <li>1 x 10<sup>-6</sup> first year<br/>after 30 days operating, typical<br/>3 x 10<sup>-7</sup> ber year thereafter, typical<br/>9 hase koiles L(f), typical (free-running)<br/>100 Hz - 114 dBc/Hz<br/>100 Hz - 114 dBc/Hz<br/>100 Hz - 116 dBc/Hz<br/>100 Hz - 110 Hz<br/>100 Hz - 116 dBc/Hz<br/>100 Hz - 110 Hz<br/>100 Hz - 110 Hz<br/>100 Hz - 116 dBc/Hz<br/>100 Hz - 116 dBc/H</li></ul>                                                                                                                                                                                                                                                                                                                                                             |                                                   |                                               |                |              | 2                    | Ground, Case        |            |                 |            |
| after 30 days operating, typical       Total Power         5 x 10 <sup>-7</sup> second year, typical       Supply Voltage         3 x 10 <sup>-7</sup> per year thereather, typical       Supply Voltage         10 Hz       -114 dBcHz         10 Hz       -167 dBc         11 dBchz       -167 dBc         11 dBc       -25 dBc         11 dBc       -26 dBc<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Aging (iree-running)                              | •                                             |                |              | 5                    | Phase Lock Voltag   |            |                 |            |
| s x 10 <sup>-</sup> gecond year, typical<br>3 x 10 <sup>-</sup> per year thereafter, typical<br>Phase Noise L(f), typical, (free-running)<br>100 Hz -114 dBcHz<br>10 KHz -145 dBcHz<br>100 KHz -167 dBcHz<br>100 KHz -167 dBcHz<br>100 KHz -167 dB dBcHz<br>Temperature Stability<br>±5 x 10 <sup>-7</sup> free-running from 0 to +70°C<br>(Ref. +25°C)<br>Harmonics<br>-25 dBc<br>Sub-Harmonics<br>-70 dBc<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC tor +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC to +5.2 VDC (Hi)<br>Out-of-L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                   |                                               |                |              | 6<br>7               |                     |            |                 |            |
| s x 10 <sup>-</sup> sector year. Hereafter, typical<br>Phase Noise L(f), typical, (free-running)<br>100 Hz - 114 dBCHz<br>1 KHz - 145 dBCHz<br>10 KHz - 145 dBCHz<br>Temperature Stability<br>± 5 x 10 <sup>-</sup> free-running from 0 to +70°C<br>(Ref. +25°C)<br>Harmonics<br>-70 dBc<br>Sub-Harmonics<br>-70 dBc<br>Sub-Harmonics<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>yoltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1 <sup>-</sup><br>Supply Voltage<br>Supply Voltage<br>Supply Voltage<br>Supply Voltage<br>Supply Voltage<br>Supply Voltage<br>-12 VDC ±5%<br>ADUSTMENT<br>Loop BW<br>Target Bandwidth: ≤ 60 Hz<br>Type 2 Loop<br>(Ref. +25°C)<br>OTHER<br>Label<br>Use conventional label with the<br>following information:<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>Supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (L0)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1 <sup>-</sup><br>Supply Supple Supply Line related Spurs<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1 <sup>-</sup><br>Supply Supple Supplied<br>Supply Supple Supple Supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1 <sup>-</sup><br>Supple Supple Sup                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                   |                                               |                |              |                      | I                   |            |                 |            |
| 3 x 10 <sup>-7</sup> per year thereafter, typical       Supply voltage         Phase Noise L(f), typical, (free-running)       10 kHz       -114 d BC/Hz         1 KHz       -144 d BC/Hz       Top BW         10 KHz       -164 dBC/Hz       Type 2 Loop         100 KHz       -168 dBC/Hz       CRYSTAL         Temperature Stability       CRYSTAL       Type 2 Loop         120 MHz SC-cut (x2)       OTHER         Label       Use conventional label with the following information:         -70 dBc       50-29503 (Current Rev.)         240 MHz MXO-PLD       -144 monics         -70 dBc       Serial # - Date Code         Spurious       Serial # - Date Code         -80 dBc, excluding power       Subply line related spurs         Phase Lock Voltage Monitor       - Output Level         TTL       - Outgage monitor pin supplied         MECHANICAL       Dimensions         3.45 x 4 x 1*       - Wenzel Associates, Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5 x 10⁻′ second year, typical                     |                                               |                | 1            | .00 —                |                     |            |                 |            |
| Phase Noise L(f), typical, (free-running)<br>100 Hz -114 dBc/Hz<br>10 KHz -145 dBc/Hz<br>10 KHz -167 dBc/Hz<br>10 KHz -168 dBc/Hz<br>Type 2 Loop<br>100 KHz -168 dBc/Hz<br>Type 2 Loop<br>(Ref. +25°C)<br>Harmonics<br>-70 dBc<br>Sub-Harmonics<br>-70 dBc<br>Sub-Harmonics, Subs, Products, Spurious<br>- Power – Warm-up and Total<br>Wenzel Associates, Inc.<br>Austin, Texes<br>Wenzel Associates, Inc.<br>Austin, Texes<br>Wenzel Associates, Inc.<br>Austin, Texes<br>Wenzel Associates, Inc.<br>- Mark MULtiplied Crystal Oscillator (MXO-PLD)<br>Pixe<br>- 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3 x 10 <sup>-7</sup> per year thereafter, typical |                                               |                |              |                      | 1 🛈                 |            |                 |            |
| 100 Hz       -114 dBc/Hz         1 KHz       -144 dBc/Hz         1 KHz       -144 dBc/Hz         10 KHz       -167 dBc/Hz         100 KHz       -167 dBc/Hz         Temperature Stability       Type 2 Loop         ±5 x 10 <sup>7</sup> free-running from 0 to +70°C       (Ref. +25°C)         (Ref. +25°C)       CRYSTAL         Harmonics       120 MHz SC-cut (x2)         -70 dBc       Use conventional label with the following information:         -70 dBc       501-29503 (Current Rev.)         240 MHz MXO-PLD       +12 VDC         -70 dBc       Serial # - Date Code         9base Lock Alarm       - Output Level         -Phase Lock Voltage Monitor       - Output Level         -Phase Lock Voltage Monitor       - Power – Warm-up and Total         Phase Lock Voltage Monitor       - Power – Warm-up and Total         Dimensions       3.45 x 4 x 1°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                   |                                               |                |              | . 56                 |                     | 4          |                 |            |
| 1 KHz       -145 dBc/Hz       Target Bandwidth: ≤ 60 Hz         10 KHz       -167 dBc/Hz       Target Bandwidth: ≤ 60 Hz         10 KHz       -167 dBc/Hz       Type 2 Loop         25 dBc       Sub-Harmonics       0 Hz SC-cut (x2)         -70 dBc       OTHER       Use conventional label with the following information:         501-29503 (Current Rev.)       240 MHz MXO-PLD         -70 dBc       Serial # - Date Code         Spurious       -80 dBc, excluding power       Serial # - Date Code         -80 dBc, excluding power       -0utput Level       -Phase Noise – free-running         - Date Code       - Output Level       - Phase Noise – Stata         - Output Level       - Phase Noise – Stata       - Output Level         - Phase Noick Voltage Monitor       - Output Level       - Phase Noise – Stata         - Output Level       - Phase Noise – Stata       - Output Level         - Phase Noise – Stata       - Output Level       - Phase Noise – Stata         - Output Level       - Phase Noise – Stata       - Output Level         - Dimensions       - Marmonics, Subs, Pr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                   |                                               |                | 0.           | .25 — 7 3            |                     |            |                 |            |
| 10 KHz -167 dBc/Hz<br>100 KHz -168 dBc/Hz<br>Type 2 Loop<br>25 tl80<br>25 dBc<br>25 dBc<br>25 dBc<br>25 dBc<br>25 dBc<br>25 dBc<br>20 MHz SC-cut (x2)<br>07 HER<br>Label<br>Use conventional label with the<br>following information:<br>-70 dBc<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (HI)<br>Out-of-Lock: :40.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>Tage 12 Jond<br>Tage 12 Jond<br>Tage 12 Jond<br>Tage 12 Jond<br>Tage 12 Jond<br>Type 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                   | •                                             |                |              |                      |                     |            |                 |            |
| 100 KHz -168 dBc/Hz<br>Temperature Stability<br>±5 x 10 <sup>-7</sup> free-running from 0 to +70°C<br>(Ref. +25°C)<br>Harmonics<br>-25 dBc<br>Sub-Harmonics<br>-70 dBc<br>PLL Divider Products<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>TOTHER<br>Label<br>CrySTAL<br>Type<br>120 MHz SC-cut (x2)<br>OTHER<br>Label<br>Use conventional label with the<br>following information:<br>501-29503 (Current Rev.)<br>240 MHz MXO-PLD<br>+12 VDC<br>Serial # - Date Code<br>(Mark connectors with function)<br>Test Data<br>- Output Level<br>- Phase Noise - free-running<br>- Harmonics, Subs, Products, Spurious<br>- Power - Warm-up and Total<br>Wenzel Associates, Inc.<br>Austin, Toxas<br>0xx Dec<br>0xx Dec<br>0xx Dec<br>0xx Dec<br>12-15-15<br>Dew::<br>Ref<br>12-15-15<br>Dew::<br>Net<br>12-15-15<br>Dew::<br>Net<br>12-15-15<br>Dew::<br>Net<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::<br>12-15-15<br>Dew::                                                                                                                                                                                                                                                                                                                                                                                              |                                                   |                                               |                |              | 0.64<br>0.64<br>0.68 | 1.45                |            |                 |            |
| Temperature Stability       Type         ±5 x 10 <sup>-7</sup> free-running from 0 to +70°C       Type         (Ref. +25°C)       120 MHz SC-cut (x2)         Harmonics       -25 dBc         -25 dBc       Use conventional label with the following information:         -70 dBc       S01-29503 (Current Rev.)         Phase Lock Alarm       240 MHz MXO-PLD         TTL       Cocked 1+3.5 VDC to +5.2 VDC (Hi)         Out-of-Lock: +0.8 VDC max (Lo)       Sub-late Noise – free-running         Phase Lock Voltage Monitor       -0 toput Level         -Phase Lock Voltage Monitor       -Naumonics, Subs, Products, Spurious         - Power – Warm-up and Total       -Wenzel Associates, Inc.         Dimensions       3.45 x 4 x 1"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                   |                                               |                |              | дĄ                   | <b>A</b>            |            |                 |            |
| t5 x 10 <sup>-7</sup> free-running from 0 to +70°C<br>(Ref. +25°C)<br>Harmonics<br>-25 dBc<br>Sub-Harmonics<br>-70 dBc<br>PL Divider Products<br>-70 dBc<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>120 MHz SC-cut (x2)<br>OTHER<br>Label<br>Use conventional label with the<br>following information:<br>501-29503 (Current Rev.)<br>240 MHz MXO-PLD<br>+12 VDC<br>Serial # - Date Code<br>(Mark connectors with function)<br>Test Data<br>- Output Level<br>- Phase Noise - free-running<br>- Harmonics, Subs, Products, Spurious<br>- Power – Warm-up and Total<br>Wenzel Associates, Inc.<br>Autin, Texas<br>Wenzel Associates, Inc.<br>Autin, Texas<br>120 MHz Multiplied Crystal Oscillator (MXO-PLD)<br>Phits 01-29503<br>- Diate: 12-15-15<br>- Diate: 12-15-15<br>- Diate: 0-XX Dec: 0-XX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   |                                               |                | 4.           |                      | ,++1L               |            |                 |            |
| (Ref. +25°C)<br>Harmonics<br>-25 dBc<br>Sub-Harmonics<br>-70 dBc<br>PLL Divider Products<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>OTHER<br>Label<br>Use conventional label with the<br>following information:<br>501-29503 (Current Rev.)<br>240 MHz MULtiplied Crystal Oscillator (MXO-PLD)<br>PN:<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Ref.<br>12-15-15<br>Drawn:<br>Re                                                                                                                                                                                                                                                                                                                                        |                                                   |                                               |                | 5.5          | <b>915</b>           |                     |            |                 |            |
| Harmonics<br>-25 dBc<br>-25 dBc<br>-25 dBc<br>-70 dBc<br>-80 dBc, excluding power<br>-80 dBc, excluding power<br>-90 dBc<br>-90 dBc                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                   |                                               |                |              |                      |                     |            |                 |            |
| -25 dBc<br>Sub-Harmonics<br>-70 dBc<br>PLL Divider Products<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>Use conventional label with the<br>following information:<br>501-29503 (Current Rev.)<br>240 MHz MXO-PLD<br>+12 VDC<br>Serial # - Date Code<br>(Mark connectors with function)<br>Test Data<br>- Output Level<br>- Phase Noise – free-running<br>- Harmonics, Subs, Products, Spurious<br>- Power – Warm-up and Total<br>Wenzel Associates, Inc.<br>Austin, Texas<br>Wenzel Associates, Inc.<br>Austin, Texas<br>Vertex and Crystal Oscillator (MXO-PLD)<br>Fix:<br>501-29503<br>- 12-15-15<br>Vertex and Code<br>(MXO-PLD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | · · · · · ·                                       |                                               |                |              |                      |                     |            |                 |            |
| Sub-Harmonics<br>-70 dBc<br>PLL Divider Products<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                   |                                               |                |              |                      |                     |            |                 |            |
| -70 dBc<br>PLL Divider Products<br>-70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                   |                                               |                |              |                      |                     |            |                 |            |
| PLL Divider Products       501-29503 (Cliffit Rev.)         -70 dBc       240 MHz MXO-PLD         -70 dBc       Serial # - Date Code         -80 dBc, excluding power       Serial # - Date Code         -80 dBc, excluding power       Serial # - Date Code         -80 dBc, excluding power       Serial # - Date Code         -80 dBc, excluding power       Serial # - Date Code         -9hase Lock Alarm       - Output Level         TTL       - Phase Noise – free-running         Locked: +3.5 VDC to +5.2 VDC (Hi)       - Harmonics, Subs, Products, Spurious         Out-of-Lock: +0.8 VDC max (Lo)       - Harmonics, Subs, Products, Spurious         Phase Lock Voltage Monitor       - Power – Warm-up and Total         Voltage monitor pin supplied       - Power – Warm-up and Total         MECHANICAL       Dimensions         3.45 x 4 x 1"       - Max Lock         Voltage       - Max Lock         Voltage       - Max Lock         Voltage       - Max Lock         MECHANICAL       - Max Lock         Dimensions       - Max Lock         3.45 x 4 x 1"       - Max Lock         - Max Lock       - Max Lock         - Max Lock       - Max Lock         - Max Lock       - Max Lock <t< td=""><td></td><td></td><td></td><td>2 (</td><td>m — 0</td><td></td><td>0</td><td></td><td></td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                   |                                               |                | 2 (          | m — 0                |                     | 0          |                 |            |
| -70 dBc<br>Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                   |                                               |                | 2.0          |                      |                     |            |                 |            |
| Spurious<br>-80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>Serial # - Date Code<br>(Mark connectors with function)<br>Test Data<br>- Output Level<br>- Phase Noise – free-running<br>- Power – Warm-up and Total<br>Wenzel Associates, Inc.<br>Austin, Texas<br>Title:<br>240 MHz Multiplied Crystal Oscillator (MXO-PLD)<br>PN: Date:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   |                                               |                |              |                      |                     |            |                 |            |
| -80 dBc, excluding power<br>supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                   |                                               |                |              |                      |                     |            |                 |            |
| supply line related spurs<br>Phase Lock Alarm<br>TTL<br>Locked: +3.5 VDC to +5.2 VDC (Hi)<br>Out-of-Lock: +0.8 VDC max (Lo)<br>Phase Lock Voltage Monitor<br>Voltage monitor pin supplied<br>MECHANICAL<br>Dimensions<br>3.45 x 4 x 1"<br>Test Data<br>- Output Level<br>- Phase Noise – free-running<br>- Harmonics, Subs, Products, Spurious<br>- Power – Warm-up and Total<br>Wenzel Associates, Inc.<br>Austin, Texas<br>Title:<br>240 MHz Multiplied Crystal Oscillator (MXO-PLD)<br>P/N:<br>501-29503<br>- 12-15-15<br>Teternes:<br>0.xx Dec:<br>0.xx Dec                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                   |                                               |                |              |                      |                     |            |                 |            |
| Phase Lock Alarm         TTL         Locked: +3.5 VDC to +5.2 VDC (Hi)         Out-of-Lock: +0.8 VDC max (Lo)         Phase Lock Voltage Monitor         Voltage monitor pin supplied         MECHANICAL         Dimensions         3.45 x 4 x 1"         PN:         PN:         01-900000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                   | · · · · · · · · · · · · · · · · · · ·         |                |              |                      |                     |            |                 |            |
| <ul> <li>Output Level</li> <li>Output Level</li> <li>Phase Noise – free-running</li> <li>Harmonics, Subs, Products, Spurious</li> <li>Power – Warm-up and Total</li> </ul> <ul> <li>Phase Lock Voltage Monitor</li> <li>Voltage monitor pin supplied</li> </ul> MECHANICAL Dimensions <ul> <li>3.45 x 4 x 1"</li> </ul> Output Level <ul> <li>Power – Warm-up and Total</li> </ul> Wenzel Associates, Inc. <ul> <li>Austin, Texas</li> </ul> Title: <ul> <li>240 MHz Multiplied Crystal Oscillator (MXO-PLD)</li> <li>Pin:</li> <li>501-29503</li> <li>12-15-15</li> <li>Toterence:</li> <li>0.XX Dec:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                   |                                               |                | 0.0          | 185 7                |                     |            |                 |            |
| <ul> <li>Phase Noise – free-running</li> <li>Harmonics, Subs, Products, Spurious</li> <li>Power – Warm-up and Total</li> </ul> <ul> <li>Phase Lock Voltage Monitor</li> <li>Voltage monitor pin supplied</li> <li>MECHANICAL</li> <li>Dimensions</li> <li>3.45 x 4 x 1"</li> </ul> <ul> <li>Phase Noise – free-running</li> <li>Harmonics, Subs, Products, Spurious</li> <li>Power – Warm-up and Total</li> </ul> Wenzel Associates, Inc. <ul> <li>Austin, Texas</li> </ul> Title: <ul> <li>240 MHz Multiplied Crystal Oscillator (MXO-PLD)</li> <li>P/N:</li> <li>501-29503</li> <li>12-15-15</li> <li>Drawn:</li> <li>Ref:</li> <li>Teteraces:</li> <li>0.XX Dec:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |                                               |                |              |                      |                     |            |                 |            |
| Out-of-Lock: +0.8 VDC max (Lo)       - Power – Warm-up and Total         Phase Lock Voltage Monitor       - Power – Warm-up and Total         Voltage monitor pin supplied       - Warm-up and Total         MECHANICAL       Dimensions         3.45 x 4 x 1"       - Warm-up and Total         P/N:       - 12-15-15         Title:       - 12-15-15         Total       - 12-15-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                   |                                               |                |              | 0 - 0                |                     | 360        |                 |            |
| Phase Lock Voltage Monitor         Voltage monitor pin supplied         MECHANICAL         Dimensions         3.45 x 4 x 1"         P/N:       Rev:       Date:       Drawn:       Ref.         Tolerances:       0.XX Dec:       0.XX Dec:       FSCM:       1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                   |                                               |                |              | 0                    |                     | <br>       |                 |            |
| Voltage monitor pin supplied       Wenzel Associates, Inc.         MECHANICAL       Austin, Texas         Dimensions       3.45 x 4 x 1"         3.45 x 4 x 1"       240 MHz Multiplied Crystal Oscillator (MXO-PLD)         P/N:       Rev:       Date:       Drawn:       Ref.         Tolerances:       0.XX Dec:       0.XX Dec:       FSCM:       1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                   | <ul> <li>Power – Warm-up and Total</li> </ul> |                |              |                      |                     |            |                 |            |
| MECHANICAL<br>Dimensions       Austin, Texas         3.45 x 4 x 1"       Title:         240 MHz Multiplied Crystal Oscillator (MXO-PLD)         P/N:       Rev:       Date:         501-29503       -       12-15-15         Tolerances:       0.XX Dec:       FSCM:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                   |                                               |                |              |                      |                     |            |                 |            |
| MECHANICAL       Austin, Texas         Dimensions       Title:         3.45 x 4 x 1"       240 MHz Multiplied Crystal Oscillator (MXO-PLD)         P/N:       Rev:       Date:       Drawn:       Ref.         Tolerances:       0.XX Dec:       0.XX Dec:       FSCM:       1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                   |                                               |                | <b>W/1</b> \ | Wenzel               | Associate           | es, Inc.   |                 |            |
| 3.45 x 4 x 1"       240 MHz Multiplied Crystal Oscillator (MXO-PLD)         P/N:       Rev:       Date:       Drawn:       Ref:         501-29503       -       12-15-15       Drawn:       Ref:         Tolerances:       0.XX Dec:       FSCM:       1       1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                   |                                               |                | لغر          |                      |                     |            |                 |            |
| P/N:     Rev:     Date:     Drawn:     Ref:       501-29503     -     12-15-15     Provide the second s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                   |                                               |                |              |                      |                     |            |                 |            |
| 501-29503     -     12-15-15       Tolerances:     0.XX Dec:     FSCM:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.45 x 4 x 1"                                     |                                               | 240            | MHZ M        | ultiplied            | Crystal Ose         | cillator ( | MXO-F           | 'LD)       |
| Tolerances: 0.XXX Dec: FSCM:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                   |                                               |                |              |                      |                     | Drawn:     | Re              | f:         |
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