REVISION RECORD REV DATE DWN AUTH 02-07-11 Draft VG -INPUT Α 02-15-11 Revised phase noise spec VG Packaging Frequency Nickel-plated machined 10 MHz, ±2 x 10<sup>-6</sup> aluminum housing Level Mounting +7 dBm ±5 dB into 50 ohms Tapped holes on sides, 16 places OUTPUT Through holes, 4 places Frequency Threaded inserts on base, 4 places 16 X .060-80 Ø0.0930 Dia 100 MHz POWER REQUIREMENTS Tapped Holes Mounting Holes 2.500 Supply Voltage Level - 1.750 +13 dBm ±2 dB into 50 ohms +15 VDC ±5% -1.490 STABII ITY Warm-Up Power -1.250 **Output Phase Noise L(f)** ≤8 Watts at start-up for 5 minutes -- 1.200 -1.010 (Free-Running) at +25° C **Total Power** -128 dBc/Hz 100 Hz ≤5 Watts at steady state +25°C 1 kHz -155 dBc/Hz 10 kHz -170 dBc/Hz ADJUSTMENT Loop BW 100 kHz -171 dBc/Hz 3.50 - 0.000 -0.000 Target Bandwidth: 60 Hz Aaina  $\pm 1 \times 10^{-6}$  per year after 30 days Type 2 Loop CRYSTAL operating, typical **Temperature Stability** SC-cut -1.010 $\pm 5 \times 10^{-7}$  free-running from 0 to  $\pm 50^{\circ}$ C, --1.200-1.250 (Ref. +25°C) -1.490 Phase Lock Alarm - 1.665 TTL - 1 750 4 X 2-56 Locked: +3.5 VDC to +5.2 VDC (Hi) Threaded Inserts -0.000 Out-of-Lock: +0.8 VDC max (Lo) 2 0.000 -0.218 1.250 0.800 0.385 0.443 0.800 0.240 0.240 1.165 Phase Lock Voltage Monitor Voltage monitor pin supplied ~ 0.400 CONN Function SPECTRAL PURITY õõ Ö 0 0 0 V AM - 0.160 Phase Lock Voltage Harmonics v Õ - 0.000 0.80 RF Out RF Signal Out ≤-30 dBc - 0.150 Supply Voltage +V RECUT AI M - 0.300 Alarm Sub-Harmonics GND Ground, Case REF INPUT Reference Signal In ≤-50 dBc **PLL Divider Products** ≤-60 dBc **Spurious** ≤-70 dBc Wenzel Associates, Inc. W **MECHANICAL** Austin. Texas Dimensions Title: 2.5 x 3.5 x 0.8" Standard 100 MHz-SC Phase Lock Crystal Oscillator Connectors P/N: Date: Drawn: Rev: Ref: SMA's and solder pins on side SPR 501-23588 Α 02-15-11 Feed-thru terminals for lock alarm. 0.XXX Dec: Tolerances: 0.XX Dec: FSCM: supply and phase lock voltage monitor (except as noted) Page 1 of 1 62821  $\pm 0.030'$ ±0.010" Dimensions are in inches

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