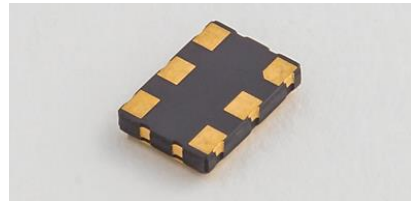


**Application: Optical DSPs**

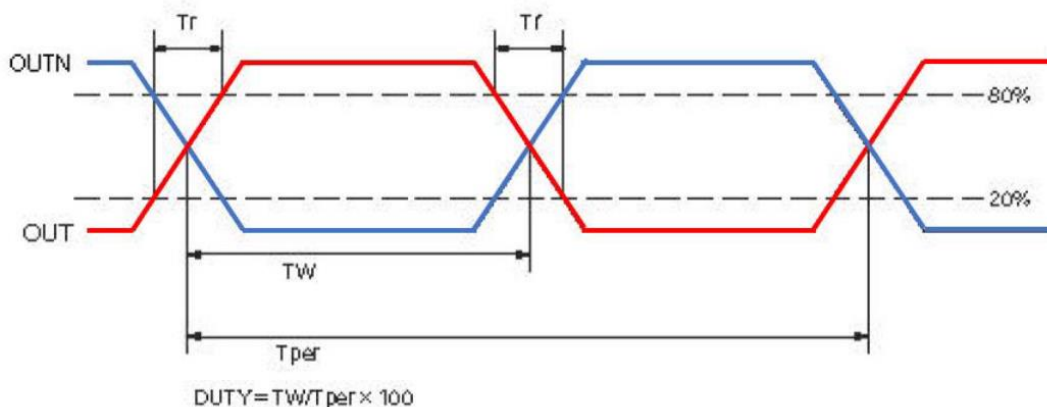


■ **ELECTRICAL SPECIFICATION**

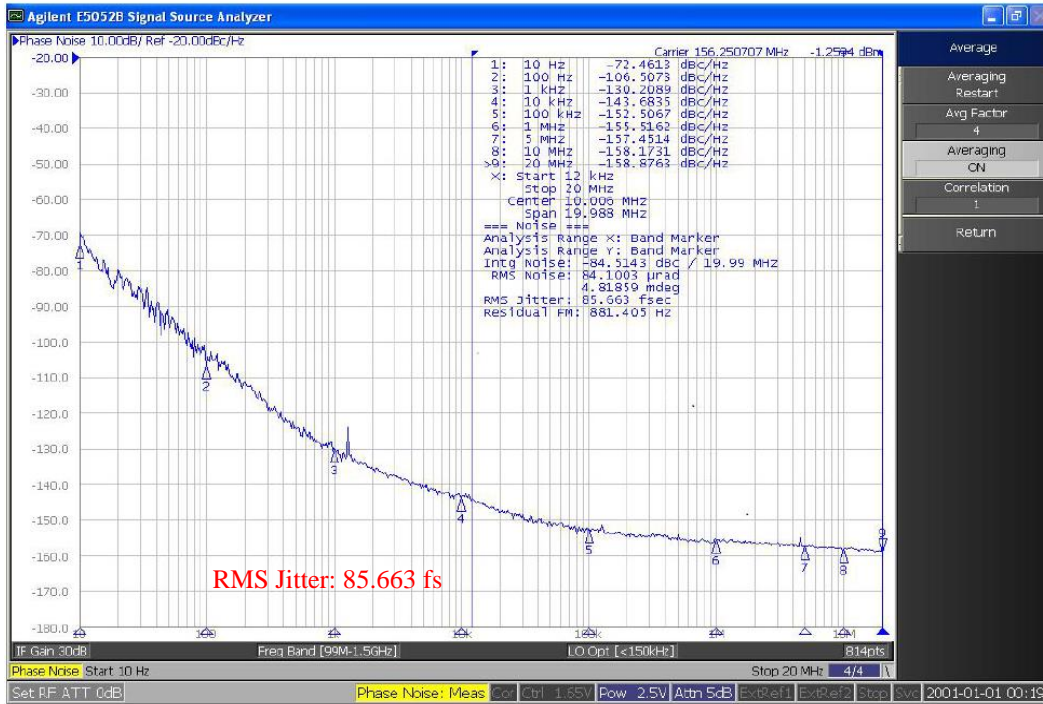
PARAMETER		VALUE
Frequency Range		13.500 ~ 156.250 MHz
Operating Temperature Range		-20°C ~ +70°C Standard -40°C ~ +85°C Extended
Frequency Stability		±25 ppm, ±50 ppm, ±100ppm
Storage Temperature Range		-55°C to +125°C
Supply Voltage (Vcc)		1.8 V, 2.5 V, 3.3 V, 2.5 ~ 3.3 V
Supply Current		40 mA max
Output LVDS	Symmetry at 50% Wave form	40% to 60% 45% to 55%
	Rise / Fall Time	1 ns max at 20% ~ 80% Output swing level
	Logic "0" Level	0.9 V min
	Logic "1" Level	1.6 V max
	Load	100 Ω (OUT – OUTN Differential)
Enable / Disable Function		Pin 1: High or Open / Output enabled (Pins 4 & 5) Pin 1: Low / Output disabled (High impedance)
Phase Noise @ 1 MHz *	@ 156.250 MHz, 2.5 ~ 3.3 V	-155 dBc/Hz typ / 150 dBc/Hz max
Jitter (12 kHz ~ 20 MHz) @ 156.250 MHz*	1.8 V	100 fs typ / 150 fs max
	2.5 ~ 3.3 V	80 fs typ / 100 fs max

Note: \* The Phase Noise/Jitter value vary with frequency and supply voltage. See examples below.

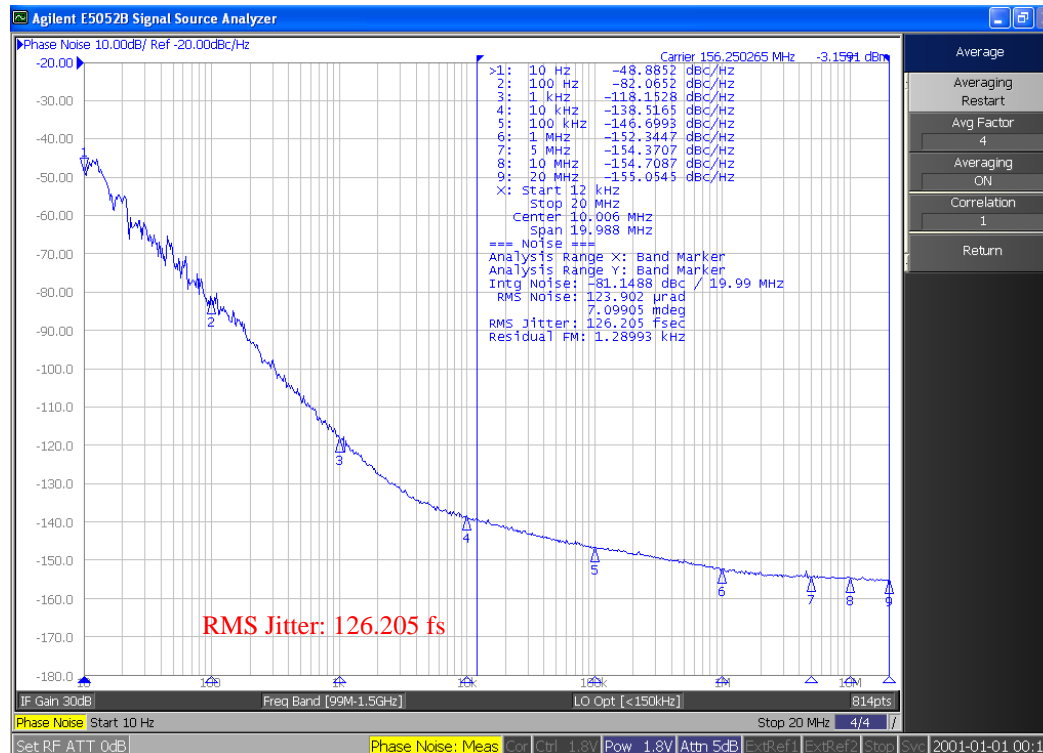
■ **OUTPUT WAVEFORM**



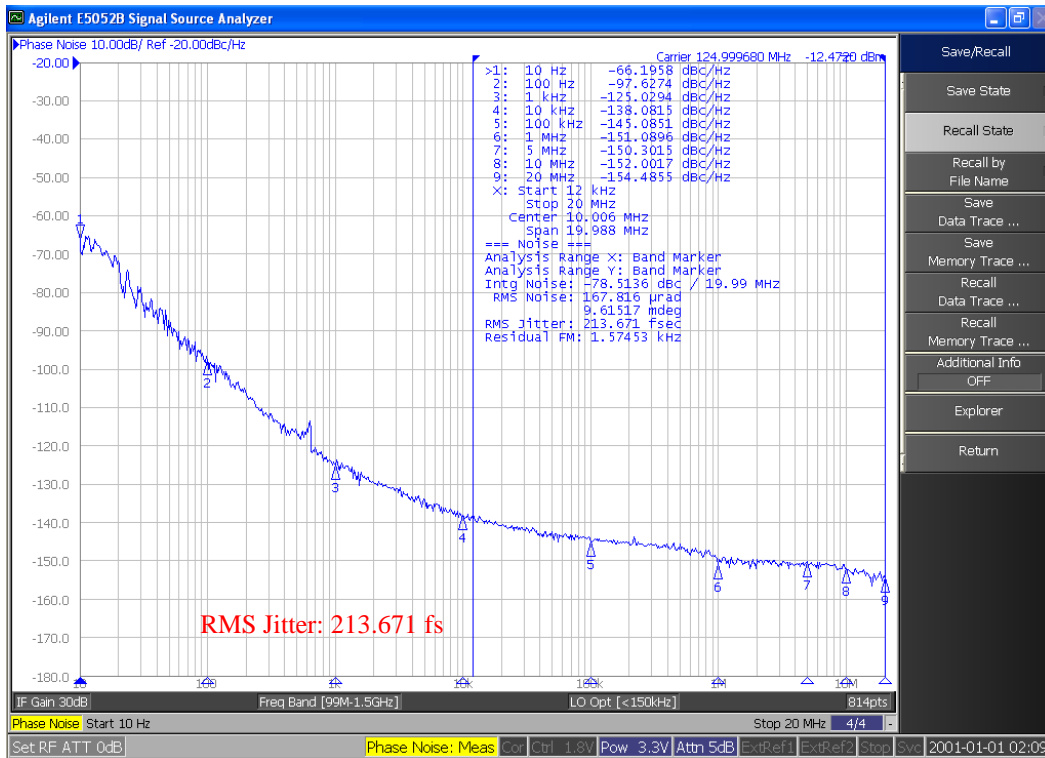
**PHASE NOISE FOR 156.250 MHz @ 2.5 ~ 3.3 V**



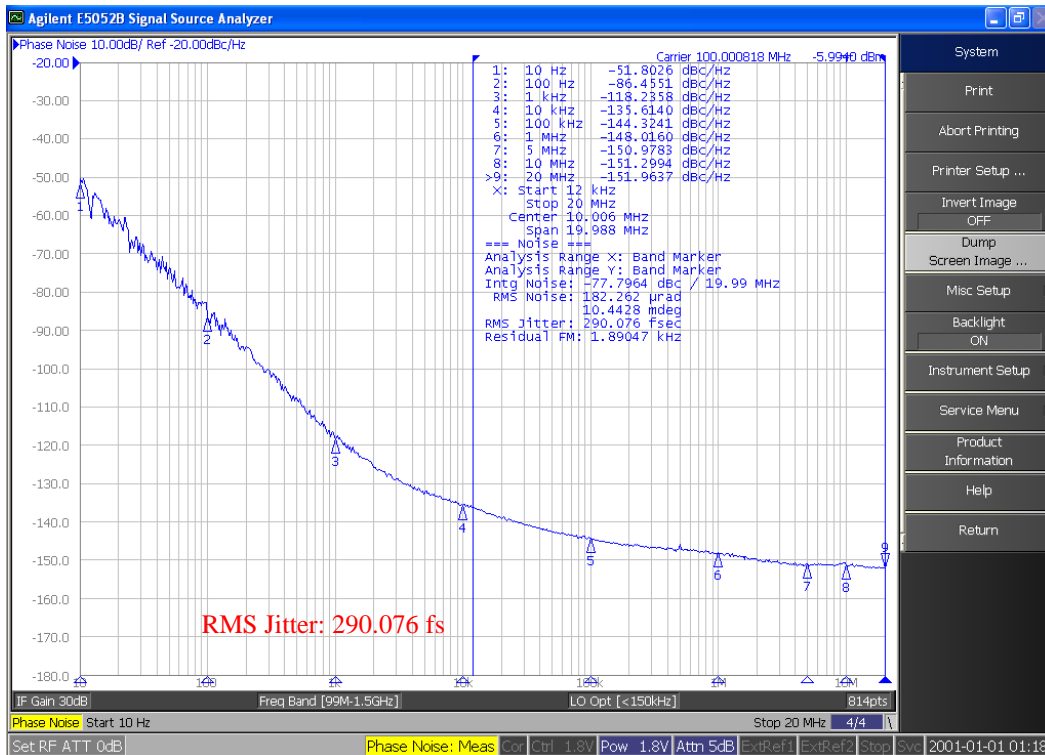
**PHASE NOISE FOR 156.250 MHz @ 1.8 V**



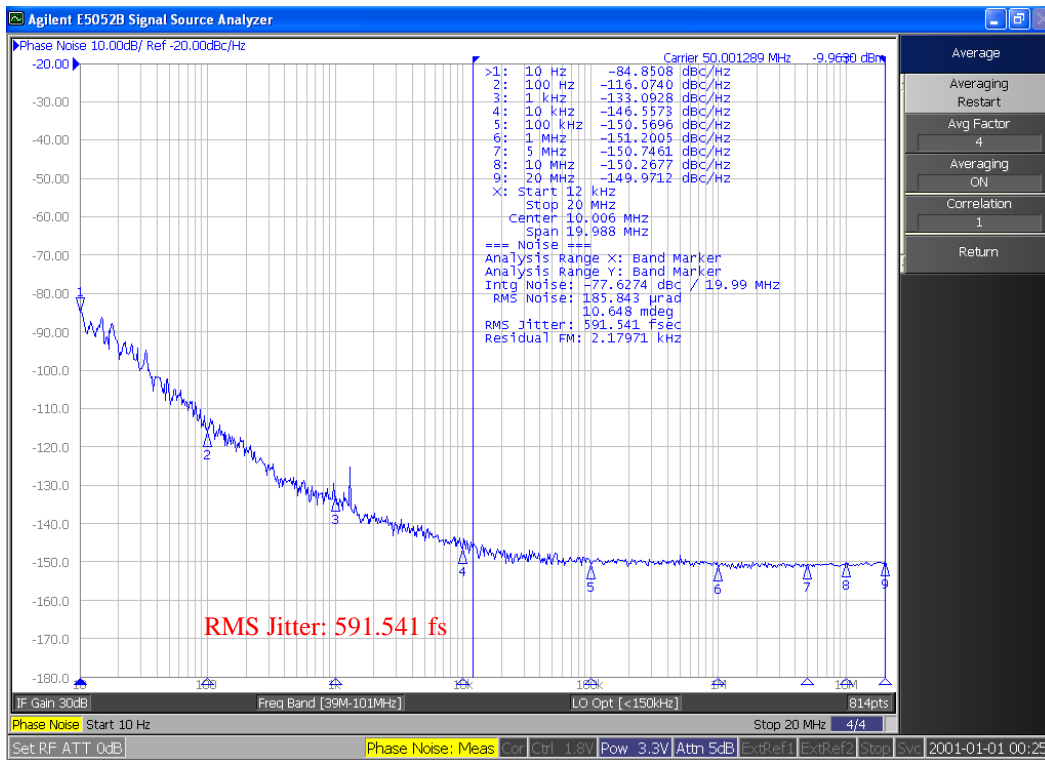
**PHASE NOISE FOR 125.000 MHz @ 3.3 V**



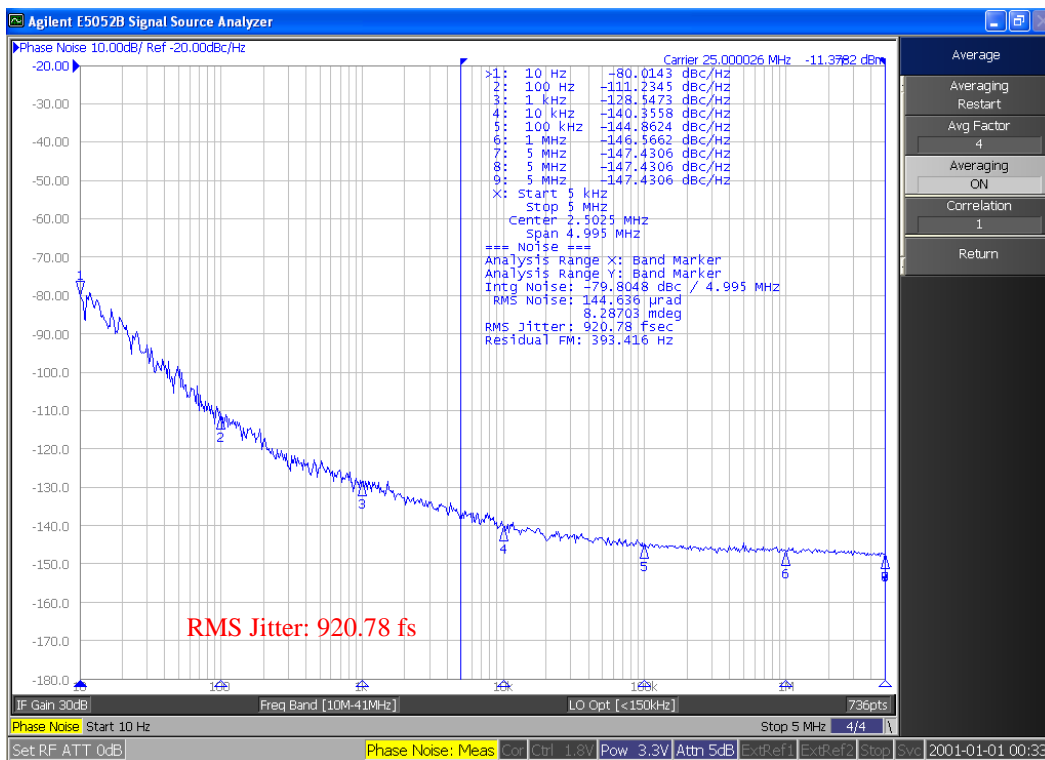
**PHASE NOISE FOR 100.000 MHz @ 1.8 V**



**PHASE NOISE FOR 50.000 MHz @ 3.3 V**

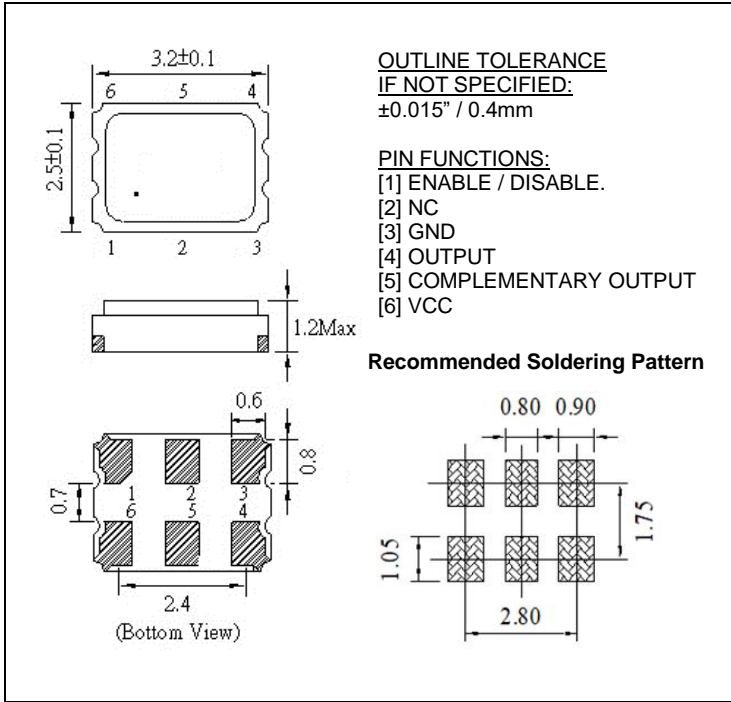


**PHASE NOISE FOR 25.000 MHz @ 3.3 V**

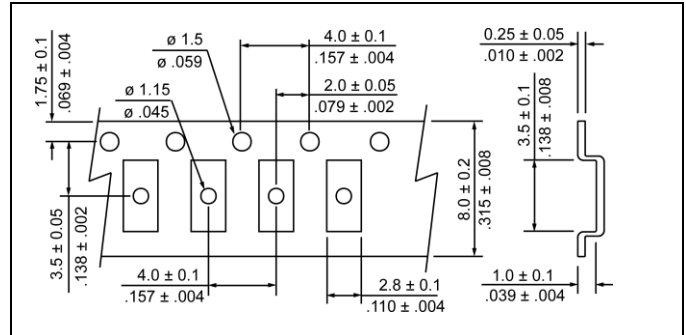


**SERIES CL3225**

■ **MECHANICAL SPECIFICATION**



■ **CARRIER TAPE DIMENSIONS**



**NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED**

■ **PACKAGING**

178 mm REEL DIAMETER  
8 mm TAPE WIDTH, 4 mm PITCH  
QUANTITY: 3000 PIECES PER REEL

■ **PART NUMBERING SYSTEM**

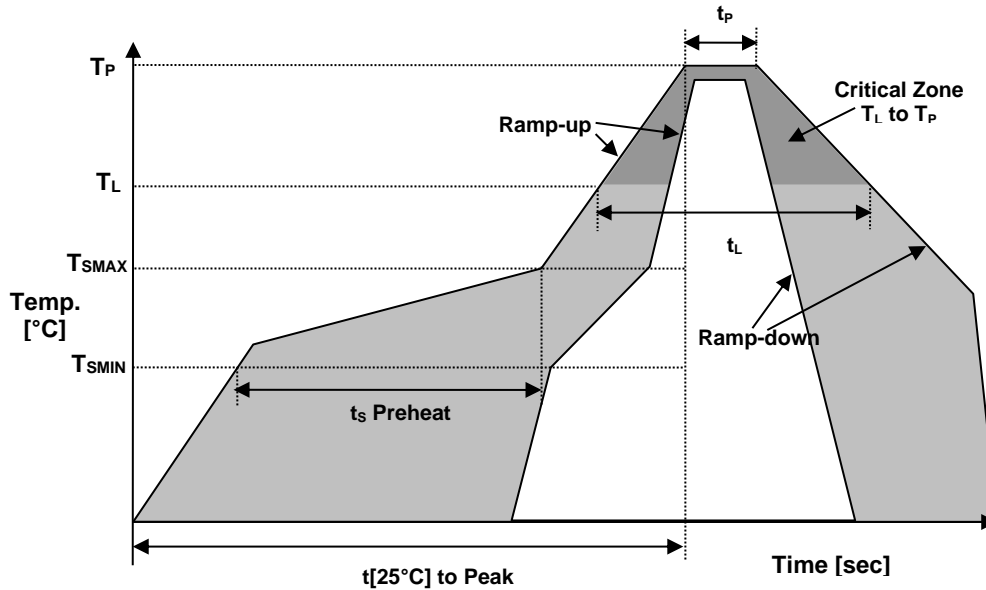
TYPE	SERIES	FREQUENCY (MHz)	SUPPLY VOLTAGE (Vcc)	STABILITY (ppm)	TEMPERATURE RANGE (°C)	SYMMETRY (Duty Cycle)	TAPE & REEL
Clock Oscillator CL	3225	13.500 ~ 156.250 MHz	1.8: Vcc=1.8 2.5: Vcc=2.5 3.3: Vcc=3.3 2.5 ~ 3.3: Vcc=L	25: ±25 ppm 50: ±50 ppm 100: ±100 ppm	blank: -20°C to +70°C X: -40°C to +85°C	blank: 40 to 60% T: 45 to 55%	TR

\*Other ranges available. Please contact factory.

**EXAMPLE: CL3225-155.520-2.5-25-X-T-TR**

Surface Mount CL3225 LVDS Oscillator, 3.2 x 2.5 mm, 155.520 MHz, 2.5 VDC Supply Voltage, ±25 ppm Overall Stability, from -40°C to +85°C, Symmetry 45% to 55%, Tape and Reel packaging.

REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	$T_{SMIN}$	150°C
Temperature Max Preheat	$T_{SMAX}$	200°C
Time ( $T_{SMIN}$ to $T_{SMAX}$ )	$t_s$	60-180 sec.
Temperature	$T_L$	217°C
Peak Temperature	$T_P$	260°C
Ramp-up rate	$R_{UP}$	3°C/sec max.
Ramp-down rate	$R_{DOWN}$	6°C/sec max.
Time within 5°C of Peak Temperature	$t_p$	10 sec.
Time $t_{[25^\circ\text{C}]}$ to Peak Temperature	$t_{[25^\circ\text{C}]}$ to Peak	480 sec.
Time	$t_L$	60-150 sec.

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH SVHC	COMPLIANT
RoHS	COMPLIANT
TERMINATION FINISH	Au

