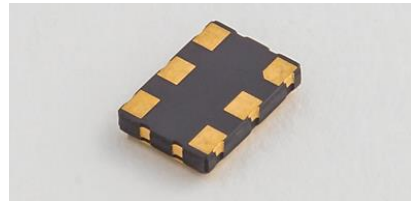


Application: Optical DSPs

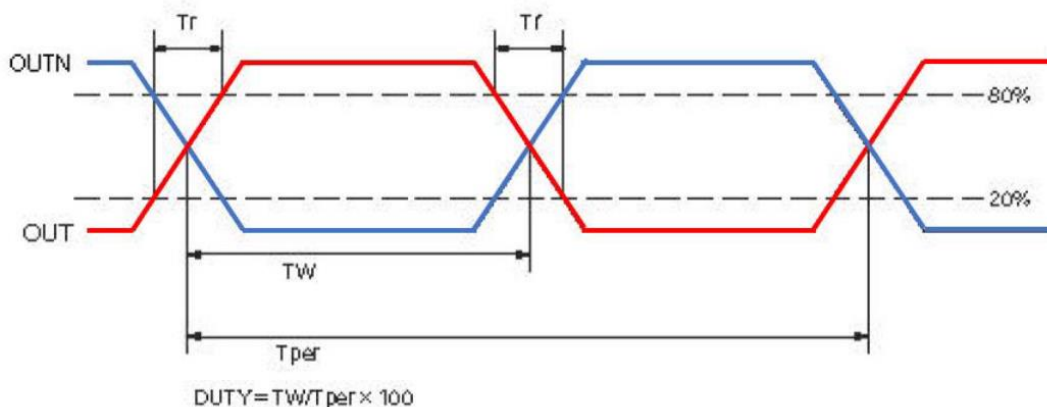


■ **ELECTRICAL SPECIFICATION**

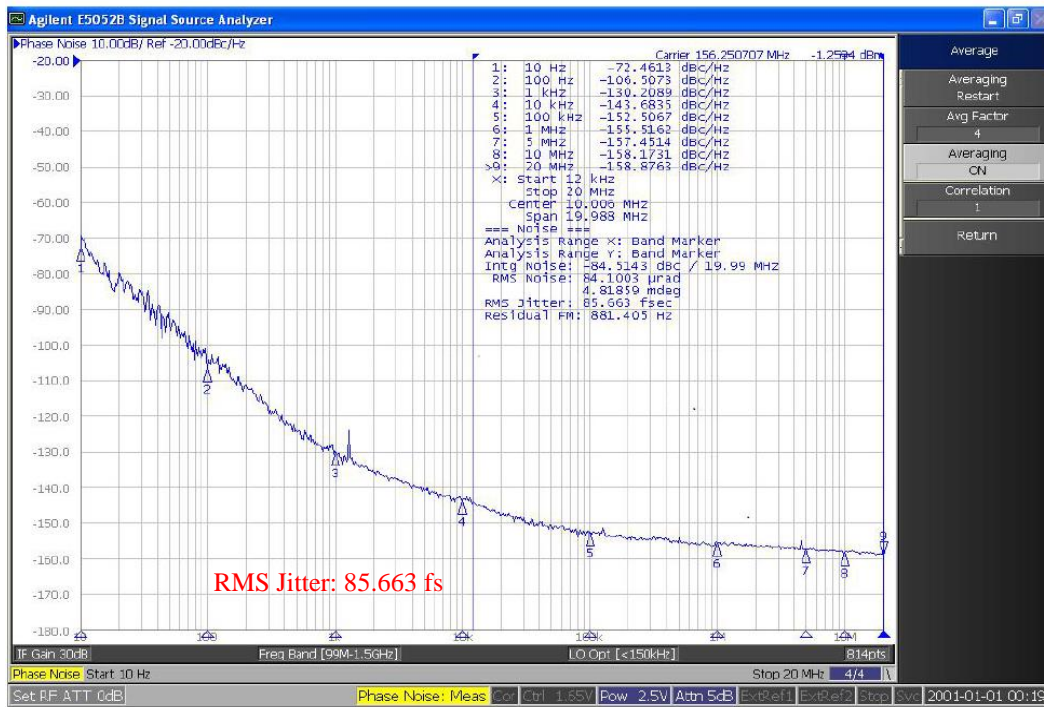
PARAMETER		VALUE
Frequency Range		13.500 ~ 333.330 MHz
Operating Temperature Range		-20°C ~ +70°C Standard -40°C ~ +85°C Extended
Frequency Stability		±25 ppm, ±50 ppm, ±100ppm
Storage Temperature Range		-55°C to +125°C
Supply Voltage (Vcc)		1.8 V, 2.5 V, 3.3 V, 2.5 ~ 3.3 V
Supply Current		40 mA max
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.

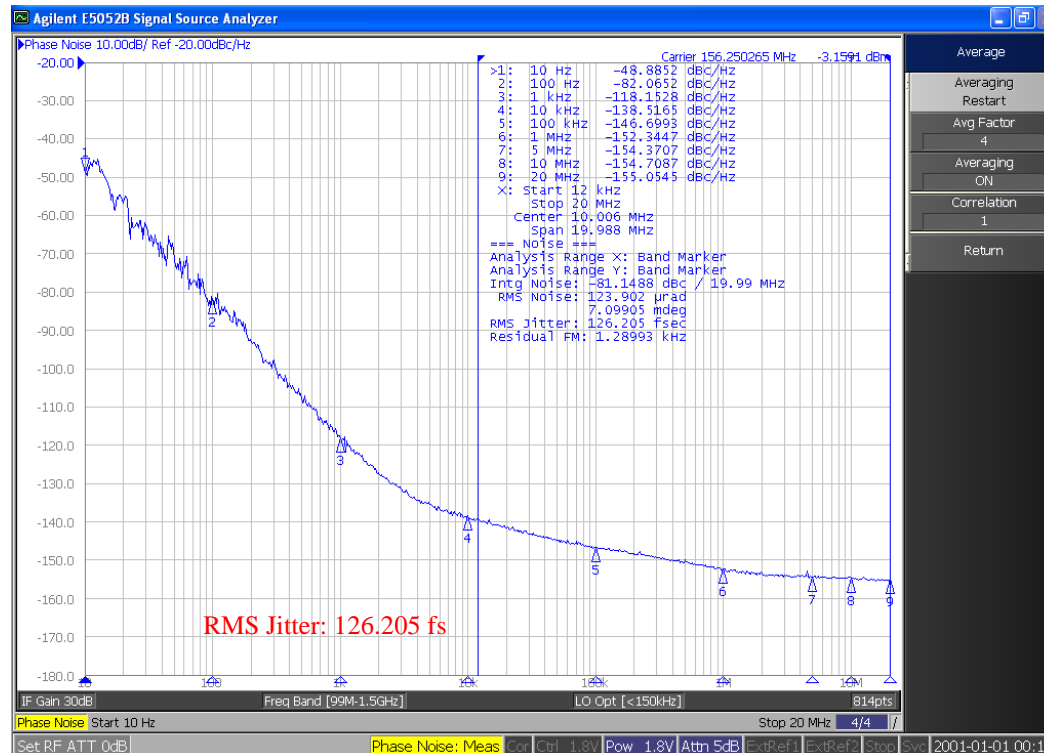
■ **OUTPUT WAVEFORM**



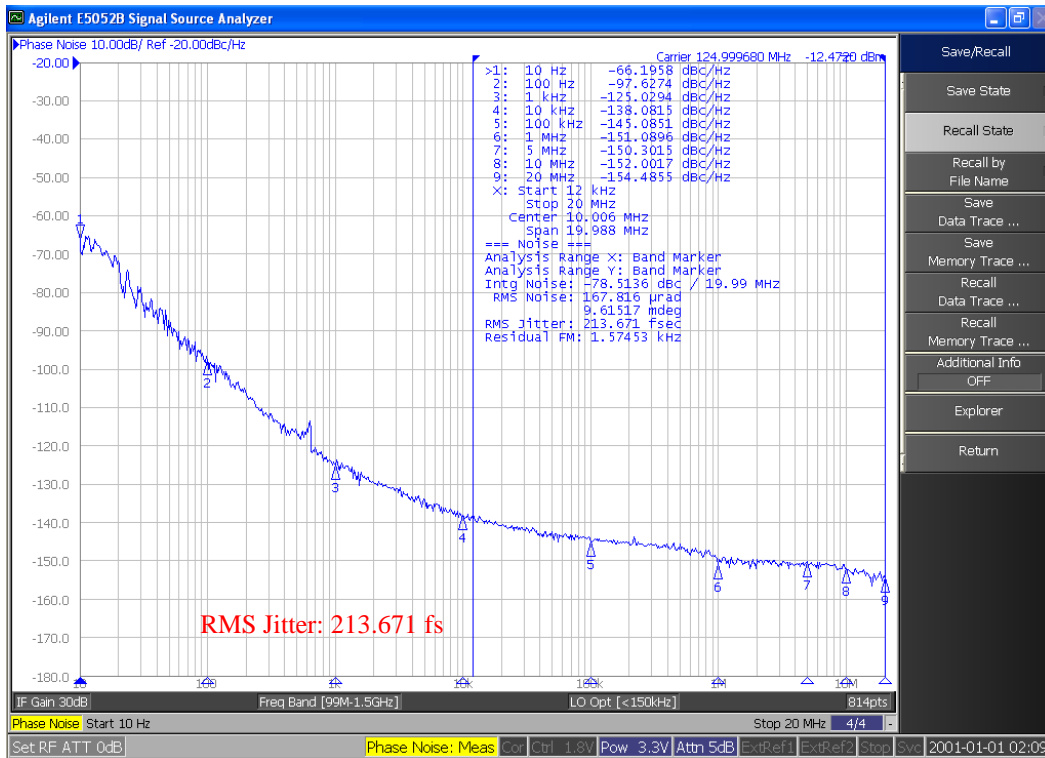
PHASE NOISE FOR 156.250 MHz @ 2.5 ~ 3.3 V



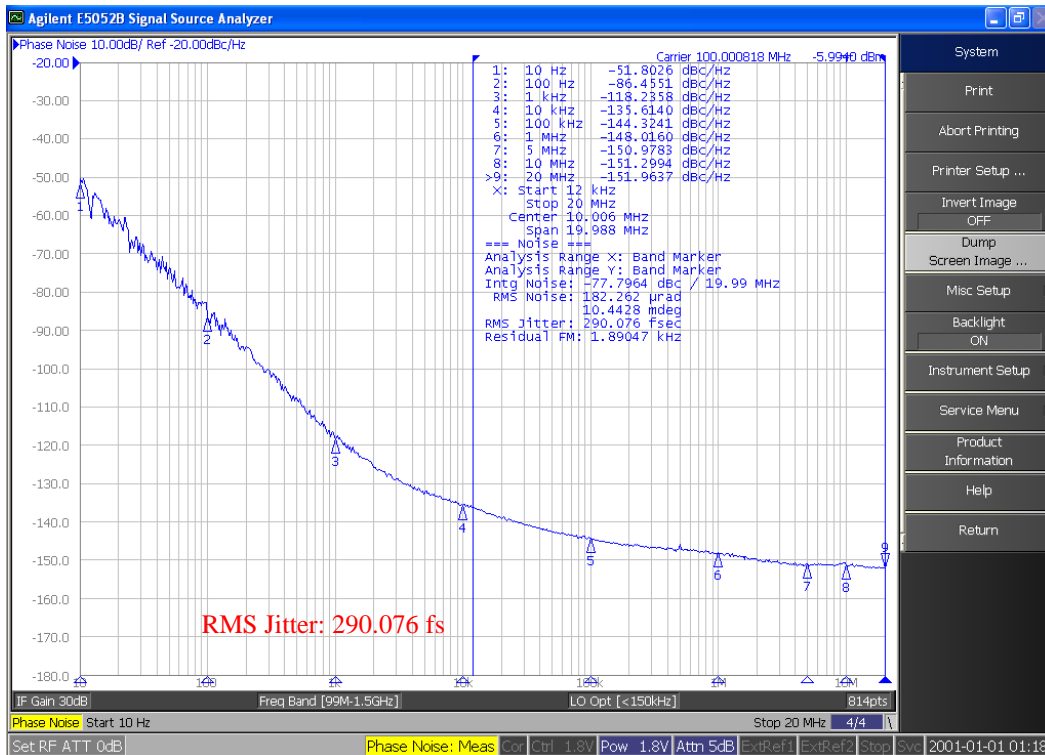
PHASE NOISE FOR 156.250 MHz @ 1.8 V



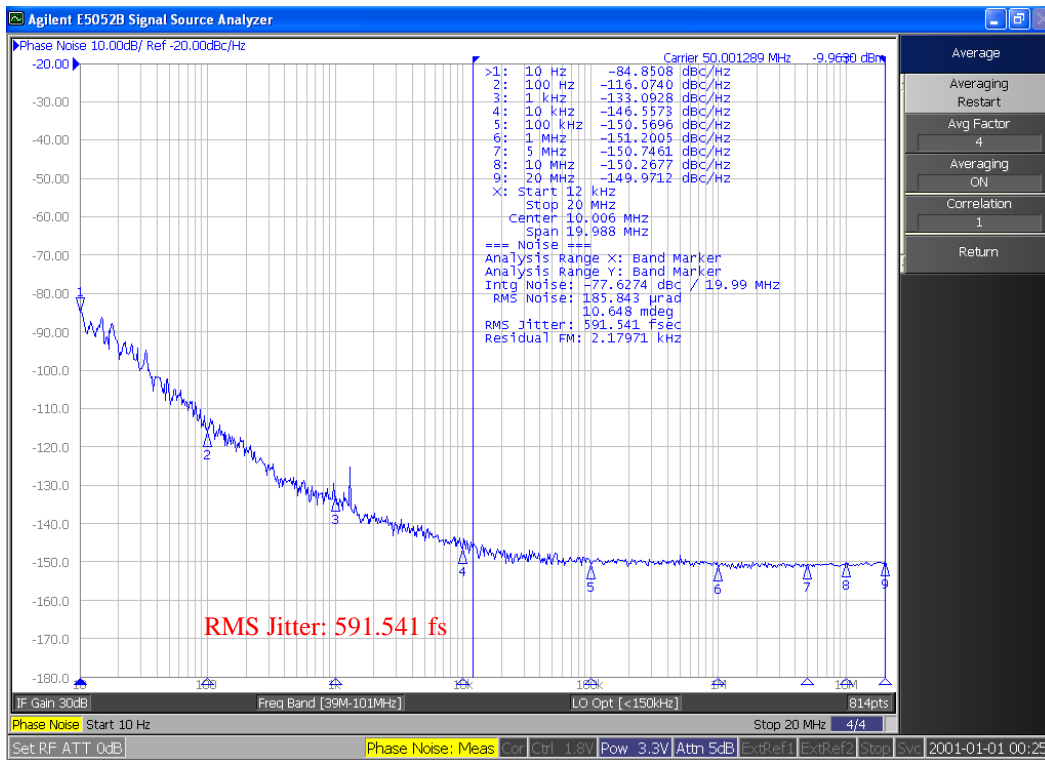
PHASE NOISE FOR 125.000 MHz @ 3.3 V



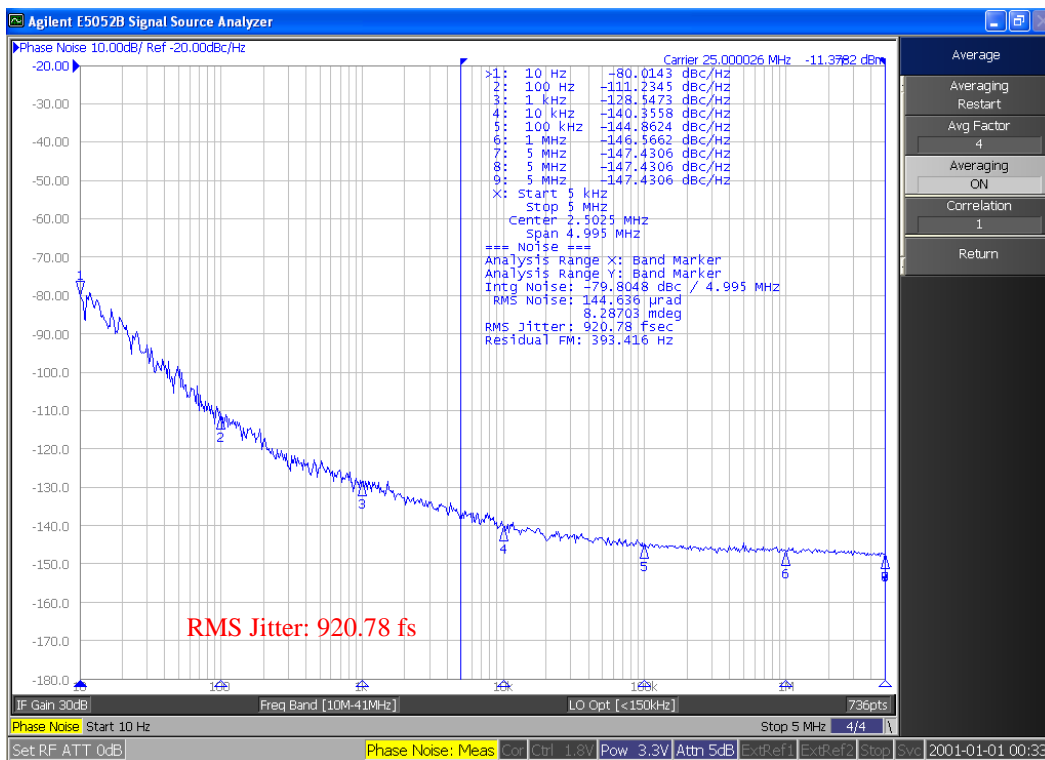
PHASE NOISE FOR 100.000 MHz @ 1.8 V



PHASE NOISE FOR 50.000 MHz @ 3.3 V

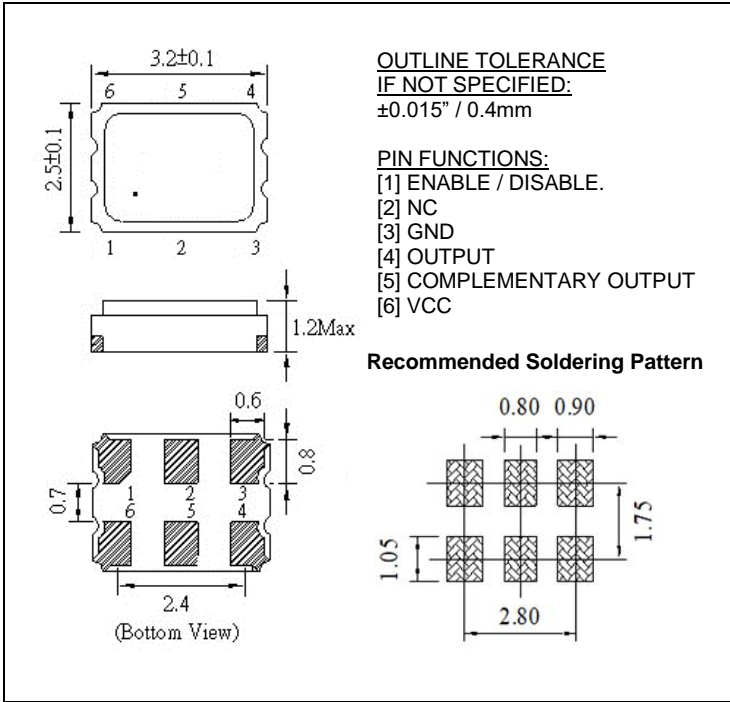


PHASE NOISE FOR 25.000 MHz @ 3.3 V

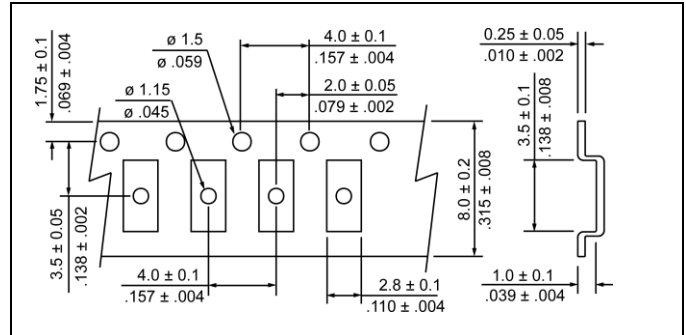


SERIES CL3225

■ **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**

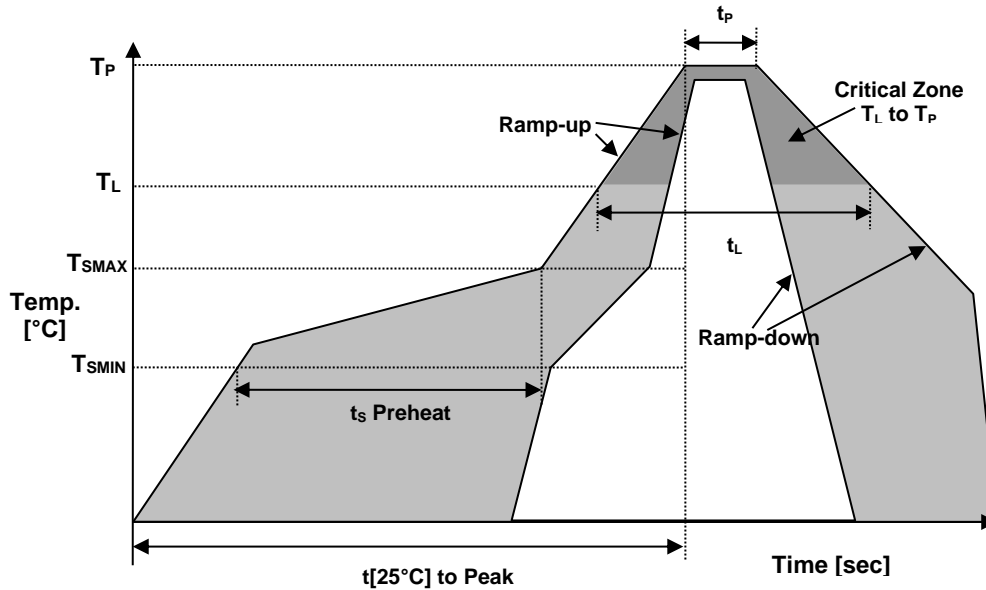
TYPE	SERIES	FREQUENCY (MHz)	SUPPLY VOLTAGE (Vcc)	STABILITY (ppm)	TEMPERATURE RANGE (°C)	SYMMETRY (Duty Cycle)	TAPE & REEL
Clock Oscillator CL	3225	13.500 ~ 200.000 MHz	1.8: Vcc=1.8 2.5: Vcc=2.5 3.3: Vcc=3.3 2.5 ~ 3.3: Vcc=L	25: ±25 ppm 50: ±50 ppm 100: ±100 ppm	blank: -20°C to +70°C X: -40°C to +85°C	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°C] to Peak Temperature	t[25°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



March 2021