

❖ **FEATURES**

- COMPACT DESIGN
- HIGH ACCURACY
- EXCELLENT FOR HIGH DENSITY SURFACE MOUNTING



❖ **SPECIFICATIONS**

PARAMETER	VALUE
FREQUENCY RANGE	12.00 MHz to 80.00 MHz
MODE OF OSCILLATION	Fundamental
FREQUENCY TOLERANCE AT 25°C	±50 ppm max (±10, ±20, ±30ppm available)
FREQUENCY STABILITY OVER TEMPERATURE	±50 ppm max (±10, ±20, ±30ppm available)
OPERATING TEMPERATURE RANGE	-10°C to +60°C Standard ¹ -40°C to +85°C Extended ¹
STORAGE TEMPERATURE RANGE	-40°C to +85°C
AGING	±2 ppm per year max
LOAD CAPACITANCE	8 pF to 32 pF or Series
EQUIVALENT SERIES RESISTANCE	See Table 1
SHUNT CAPACITANCE	3.5 pF max
DRIVE LEVEL	100 µW max
SHOCK RESISTANCE	±5 ppm max 75 cm drop test onto a hard wood surface
REFLOW CONDITIONS	260°C for 10s max



¹ NOTE: NOT ALL STABILITIES ARE AVAILABLE FOR ALL OPERATING TEMPERATURE RANGES. CONTACT FACTORY FOR AVAILABILITY.

TABLE 1

FREQUENCY (MHz)	MODE	MAX ESR (Ω)
12.000 to 15.999	FUND	180
16.000 to 20.999	FUND	150
21.000 to 30.999	FUND	100
31.999 to 80.000	FUND	60

SERIES RR2520

❖ **PART NUMBERING SYSTEM**

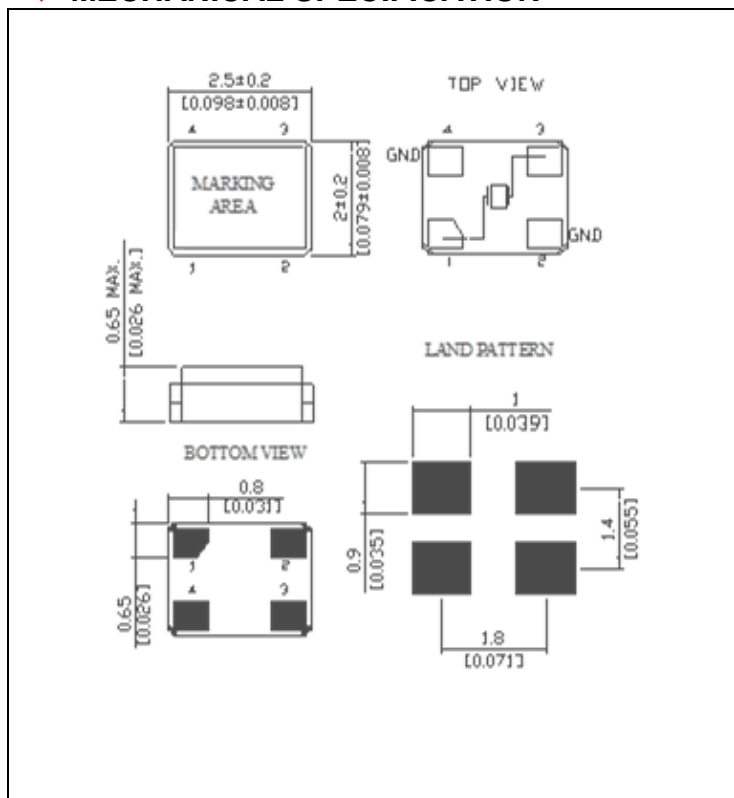
TYPE	FREQUENCY	LOAD CAPACITANCE	MODE	TOLERANCE/STABILITY (PPM/PPM)
RR2520	IN MHz	10 TO 32 pF FOR PARALLEL S FOR SERIES	Blank FOR < 24.576 MHz F FOR ≥ 24.576 MHz	Blank FOR MAXIMUM PPMPPM Example: 1020, 2050

EXTENDED TEMPERATURE	TAPE & REEL
Blank FOR STANDARD EXT FOR EXTENDED	TR

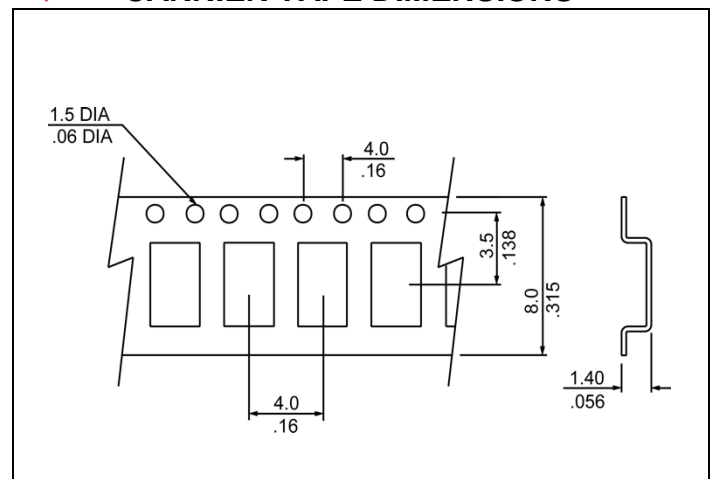
EXAMPLE: RR2520-20.000-10-2020-TR

Surface Mount Crystal, 2.5 mm x 2.0 mm package, 20.000 MHz, 10 pF load, ±20 ppm Tolerance, ±20 ppm Stability over the Operating Temperature from -10°C to +60°C, Tape and Reel packaging

❖ **MECHANICAL SPECIFICATION**



❖ **CARRIER TAPE DIMENSIONS**



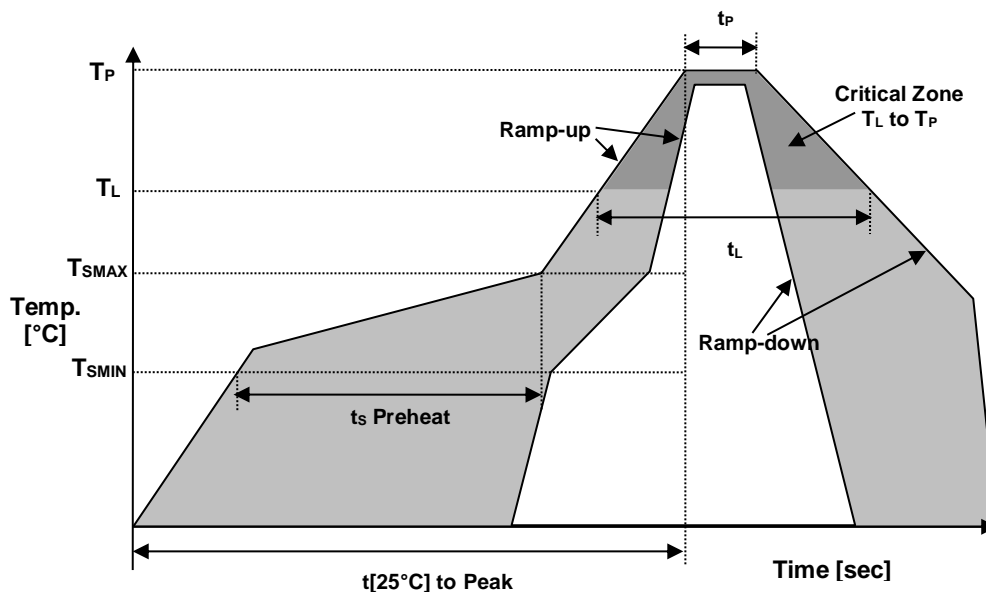
NOTE: REFER TO EIA-481 FOR DIMENSIONS

❖ **PACKAGING**

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

IN ACCORDANCE WITH EIA-481

❖ 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
RoHS	COMPLIANT
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
ESD CLASSIFICATION LEVEL	N/A
TERMINATION FINISH	Au

