RELM componentes

SHOULDER

SMD2520 Crystal

DESCRIPTION

ELECTRICAL SPECIFICATION

Frequency Range	16.000 to 50.000 MHz
Load Capacitance	8pF to 32pF or series
Frequency Tolerance (at 25˚C)	±10,±15,±20,±30,±50ppm or specify
Oscilation mode	Fundamental
Frequency Stability in Temperature	±10,±15,±20,±30,±50ppm or specify
Operating Temperature Range	-20˚C to +70˚C Standard (or optional)
Storage Temperature Range	-40˚C to +85˚C
Equivalent Series Resistance (ESR)	See ESR Table
Drive Level	10µW Typical, 100µW Máx.
Shunt Capacitance	3pF Maximum
Aging (at 25˚C)	±3ppm per year
Insulation Resistance	500 MOhm Minimum

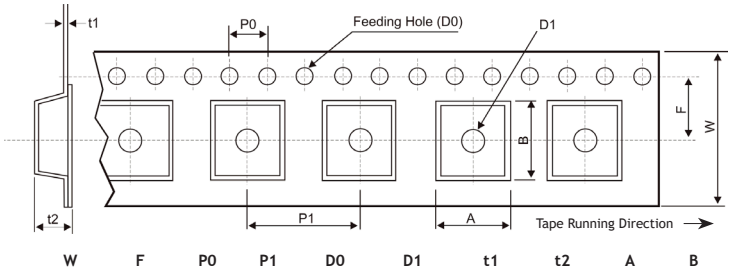
FREQUENCY RANGE AND OSCILLATION MODE

Fundamental (F)	16.000 to 50.000MHz

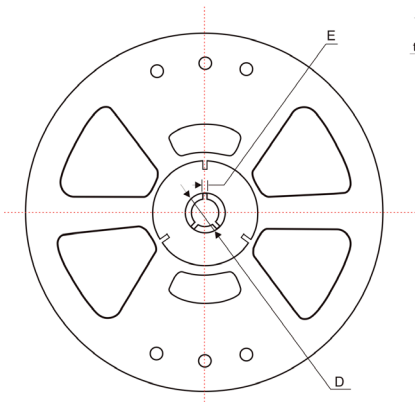
ESR TABLE (Ohms)

16.000 to 20.000MHz	100Max
20.000 to 30.000MHz	80Max
30.000 to 40.000MHz	60Max
40.000 to 50.000MHz	50Max

TAPE SPECIFICATIONS (all in mm) - Carrier Tape Dimensions



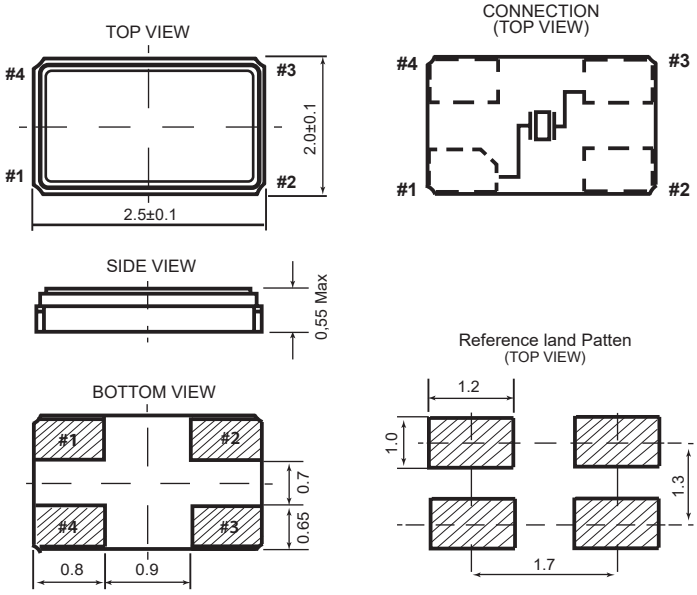
W	F	P0	P1	D0	D1	t1	t2	A	B
8.0±0.3	3.5±0.05	4.0±0.1	4.0±0.1	Ø1.5±0.1	Ø1.6±0.25	0.3±0.03	1.2±0.1	2.3±0.1	2.8±0.1



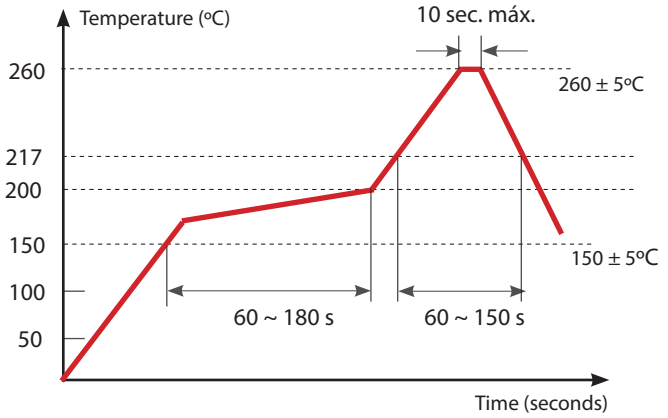
Reeling Quantity
3000pcs / reel

A	Ø178±1.0
B	Ø60±0.5
D	Ø21.6
E	2±0.5
W	12.2
t	1.6 max.

MECHANICAL DIMENSIONS (all in mm)



SOLDERING



Frequency Stability Over Operating Temperature Range					
Temperature Range	Frequency Stability (ppm)				
	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
0~+50ºC	x	x	x	x	x
-10~+60ºC	x	x	x	x	x
-20~+70ºC	x	x	x	x	x
-30~+80ºC		x	x	x	x
-40~+85ºC			x	x	x

PART NUMBERING SYSTEM (Example)

SMD02520-22.1184-F-20-30-30-A-T

Hold Type
SMD0705 / SMD3225 / SMD1612 / SMD0503/ SMD0603 / SMD2016 / 49S-SMD / 49S2-SMD

Nominal Frequency (MHz)
Enter the nominal frequency (3 digits after dot) or up to last significant digit different than zero)

Mode of Operation (Vibration Mode)
F= Fundamental / T= 3ª overtone

Load Capacitance
S=Series Resonant or enter load capacitance 10 to 32 for parallel

Frequency Tolerance (± ppm)

Frequency Stability (± ppm)

Operating Temperature Range (˚C)
A= -20˚C to 70˚C
B= -10˚C to 60˚C
C= 0˚C to 50˚C
D= -30˚C to 80˚C
E= -40˚C to 85˚C

Options (can be blank)
S= Standard
X= Additional Specifications
T= Tape and Reel

RELM - SHOULDER Brasil

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