

SHOULDER

SMD0603(2P) Crystal

0.15

Lead

18.432

DESCRIPTION

The SMD0603(2P) crystal has a ultra small package and wide frequency range.

ELECTRICAL SPECIFICATION

Frequency Range 10.00 to 110.00 MHz

Load Capacitance 10pF to 33 (for parallel)

Frequency Tolerance (at 25°C) ±20ppM Maximum

Frequency Stability at -10 to +60°C ±20ppM Maximum

Operating Temperature Range -20°C to +70°C

Storage Temperature Range -40°C to +85°C

Equivalent Series Resistance (ESR) See ESR Table

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Drive Level 0.1mW Maximum

Shunt Capacitance 7pF Maximum

Aging (at 25°C) ±5ppM per year

Insulation Resistance 500 MOhm Minimum

ENVIRONMENTAL SPECIFICATION

1. Temperature test

Temperature

Low Temperature

cycling test

2. Aging test

3. Salt spray test

4. Humidity test

test

Conditions

Steps of cycle

Number of cycles

Temperature

Length of test

Temperature

Length of test

Temperature

Length of test

Temperature

Length of test

Relative humidity 90 ~ 95%

NaCI %

ESR Table (Ohms)

8.0 to 12.0MHz 80 max 12.0 to 40.0MHz 60 max 40.0 to 100.0MHz (3rd overtone) 100 max

Results

Frequency and wave

must remain within

specifications

form of tested products

There should be no stain

on surface of products.

form of tested products

Frequency and wave

must remain within specifications

Deviation of frequency must be less than ±3ppM

There should be no stair

on surface of products

a) Insulation resistance

Vac minimum. b) Resistance and wave

must be 500 MOhms/100

form must remain within specifications

1) at -55°C, 30 minutes 2) at +25°C, 10-15 min.

3) at +85°C, 30 minutes

4) at +25°C, 10~15 min.

3 times

96 hours

96 hours

48 hours

5%

-20°C ±2°C

+85°C ±20°C

+35°C ±2°C

+40°C +2°C

96 hours

SOLDERING

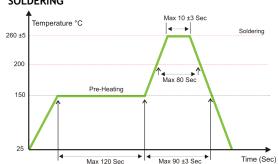
3.0

MECHANICAL DIMENSIONS (all in mm)

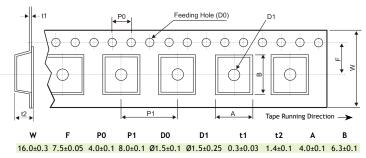
3.5±0.15

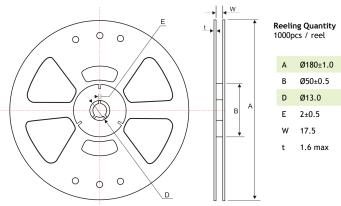
1.5

6+0.15



TAPE SPECIFICATIONS (all in mm) - Carrier Tape Dimensions

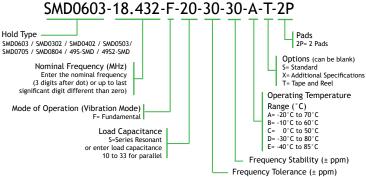




MECHANICAL SPECIFICATION

MECHANICAL SPECIFICATION			
	Conditions		Results
1. Vibration test			
	Frequency	10 ~ 55Hz	Frequency and wave form of tested products must remain within specifications
	Amplitude	0.762mm	
	Sweep	1.0 minute	
	Duration	2 hours	
2. Terminal Strength	Load	907.2 gram	There should be no distortion in appearance
Lead pulling test	Direction	to the downward	
	Duration of applied force	5 seconds	
Lead bending test	Load	453.6 gram	There should be no distortion in appearance
	Bending angle	90° to normal position	
	Rate of bending	3 seconds in each cycle	
	Number of bending	3	
3. Lead solderability test	Dipping in solder (+245° ±5°C) for 5 seconds		More than 95% of surface being tested should be coated uniformly with solder
4. Drop test			
	Method of drop	Natural drop	Frequency and wave form of tested products must remain within specifications
	Dropping floor	Hard wood board	
	Height	30 cm	
	Number of drops	3 times	

PART NUMBERING SYSTEM (Example)



RELM - SHOULDER Brasil