

### Ceramic Resonator 3.7 x 3.1mm SMD package External Capacitance Type



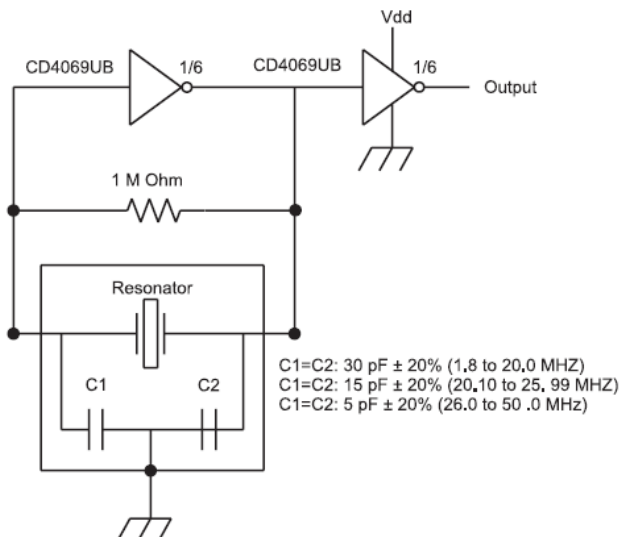
#### Features

- Cost effective
- Small and Light
- High Durability
- Excellent Temperature Stability

#### Electrical Specifications

Frequency Range		8.000 to 54.000	MHz
Frequency Tolerance at 25°C		±0.5	% Max
Frequency Stability over Temperature Range	Standard	±0.3	% Max
Temperature Range	Operating	-20 to +80	°C
	Storage	-40 to +85	
Aging over 10 Years		±0.3	% Max
Voltage Rating	DC	6.0	V
	AC	15	V p-p
	Maximum	100 for 5 seconds	V Max
External Capacitance (See Test Circuit)	C1=C2	10 to 16	pF
Equivalent Ser Resistance (ESR)		70	Ohms Max
Insulation Resistance (Applied at 10Vdc)		500	M Ohm Min

#### Test Circuit :

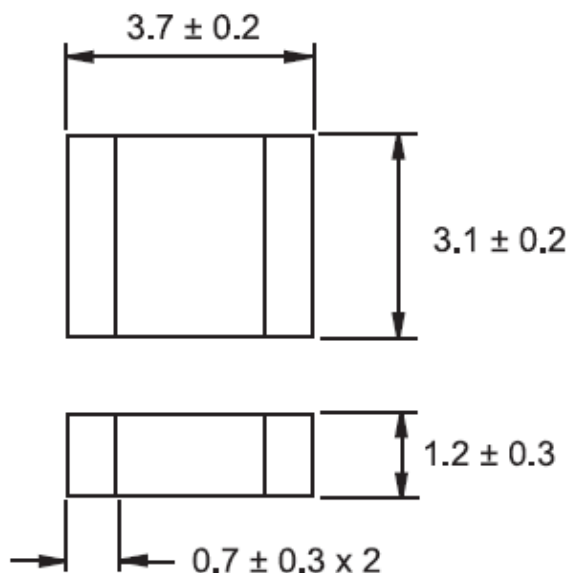


### Part Numbering System

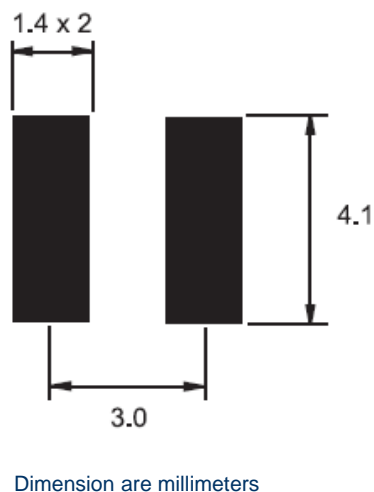
Type	-	Frequency	-	Tape & Reel
WSR33A		in MHz		TR

Examples : WSR33A-24.000-TR or WSR33A-28.000-TR

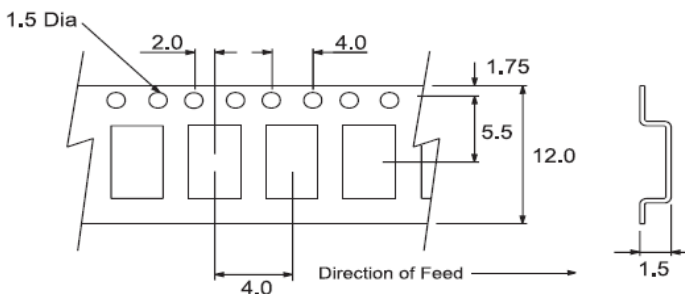
### Mechanical Outline



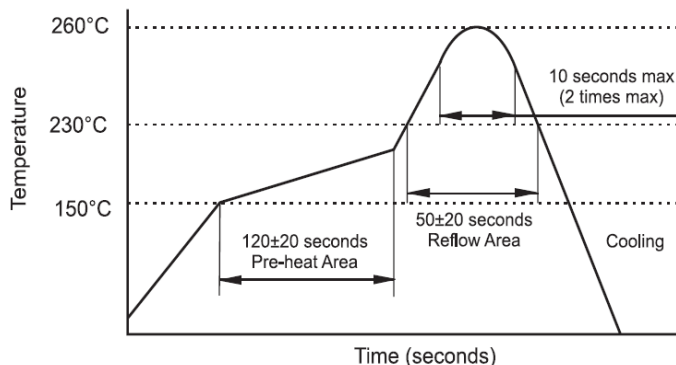
### PCB Solder Pad Layout



### Carrier Tape Dimensions



### Solder Reflow Characteristics



#### Notes:

- 1 – Lead Pb in Ceramic is exempt per RoHSF 2002/95/EC, Annex 7.
- 2 – Product is shipped in Tape & Reel, each pack is 3000 pieces
- 3 – Specification subject to change without notice.