MMC-463F-32.768kHz-T

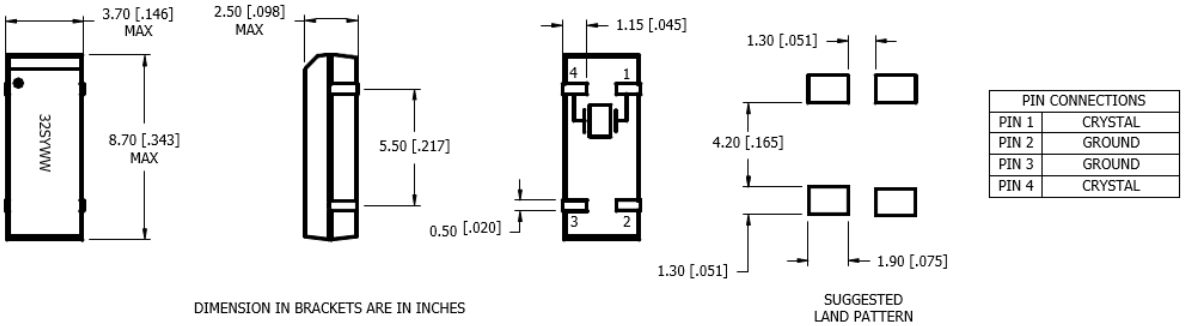
- **Plastic SMD Crystal**
- **32.768 kHz**
- **RoHS Compliant**

Frequency	32.768 kHz
Tolerance at +25°C	±20 ppm
Stability	Parabolic Coefficient -0.04 max ppm/(Δ°C)^2 max
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C
Equivalent Series Resistance	50 kΩ max
Load Capacitance	12.5 pF ±0.5 pF
Shunt Capacitance	1.3 pF typical
Motional Capacitance	2.7 fF typical
Drive Level	1 µW max
Aging (first year)	±3 ppm max at +25°C ±3°C
Mode of Operation	Tuning Fork, X-Cut
Insulation Resistance	500 MΩ min at 100 VDC

Mechanical & Environmental Detail

Shock	MIL-STD-883, Meth 2002, Cond B
Solderability	MIL-STD-883, Meth 2003
Vibration	MIL-STD-883, Meth 2007, Cond A
Moisture Sensitivity Level	Level 2 per JEDEC J-STD-020
Reflow Soderability	260°C, 10 secs max

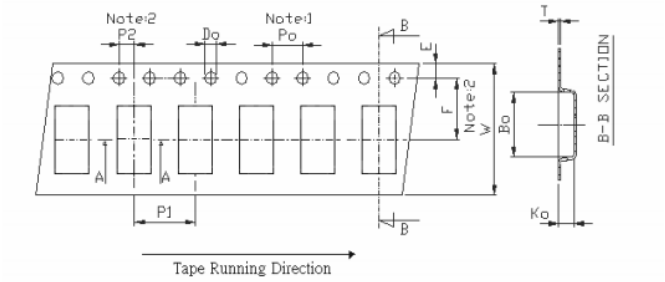
Mechanical Details

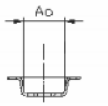


PIN CONNECTIONS	
PIN 1	CRYSTAL
PIN 2	GROUND
PIN 3	GROUND
PIN 4	CRYSTAL

Tape & Reel Dimensions

Quantity per Reel: 3000 Units





Ao= 3.10±0.10 mm

Bo= 9.80±0.10 mm

Ko= 2.70±0.10 mm

Unit: mm

Symbol	Spec.
K1	–
Po	4.00± 0.10
P1	8.00± 0.10
P2	2.00± 0.10
Do	$1.50^{+0.1}_{0}$
E	1.75± 0.10
F	7.50± 0.10
10Po	40.0± 0.10
W	16.0± 0.30
T	0.30± 0.05

Notice:

1. 10 Sprocket hole pitch cumulative tolerance is ±0.10 mm
2. Pocket position relative to sprocket hole measured as true position of pocket not pocket hole.
3. Ao & Bo measured on a place 0.3mm above the bottom of the packet to top surface of the carrier.
4. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
5. Carrier camber shall be not than 1mm per 100mm through a length of 250mm.