





# X532 CERAMIC SURFACE-MOUNT CRYSTAL

### **FEATURES**

- Not recommended for new designs
- Small SMD package, 2 pad version
- Excellent heat resistance and shock resistance
- Applications: Bluetooth, Wireless applications, Mobile phones,...

5.0 x 3.2 x 1.2 mm



Item	Symbol	Specification			
Frequency Range	Fo	8 MHz ~ 80 MHz			
Operation Mode		$8.0~\text{MHz} \sim 48.0~\text{MHz}$ Fundamental $48.1~\text{MHz} \sim 80.0~\text{MHz}$ 3rd-overtone (see options)			
Operating temperature Range	То	-20° to +70°C (see options)			
Frequency Tolerance at 25°C	Δf/F	± 50ppm max. (see options)			
Temperature Stability	Δf/F	± 50ppm max. (see options)			
Load Capacitance (CL)	CL	series or 8 pF to 50 pF (see options)			
Equivalent Series Resistance	ESR	See Table 1			
Shunt Capacitance (Co)	Co	5pF Max			
Insulation Resistance	Ri	500 MΩ min. (at 100Vdc)			
Drive Level	DL	100μW typical, 300μW max.			
Aging	Δf/F	±3ppm max (at 25°C, first year)			
Packing Unit		1000pcs / reel			
Soldering Condition		260°C, 10 sec x2 max			
		Customer specifications on request			

#### TABLE 1: Standard ESR

Frequency (MHz)	ESR (Ω) max.	Frequency (MHz)	ESR (Ω) max.
8.0 - 9.99	100	48.0 - 80.0, 3rd overtone	70
10.0 - 19.9	60		
20.0 - 48.0	40		

#### **OPTIONS & ORDERING INFORMATION**

X532-							MHz
	Freq. Tolerance	Freq. Stability	Operating Temp.	Load Capacitance	Mode	ESR if other than STD	Frequency in MHz
	<b>10</b> = ±10 ppm	$10 = \pm 10 \text{ ppm}$	<b>D</b> = -10° / +60°C	Please specify CL in	F = Fundamental	Specify a value in $\Omega$	Please specify the
	<b>15</b> = ±15 ppm	<b>15</b> = ±15 ppm	<b>E</b> = 0° / +70°C	pF or S for Series	<b>D</b> = 3rd overtone		frequency in MHz
	<b>20 =</b> ±20 ppm	<b>20 =</b> ±20 ppm	<b>F</b> = -20° / +70°C				
	<b>25</b> = ±25 ppm	<b>25 =</b> ±25 ppm	<b>G</b> = -30° / +75°C				
	<b>30</b> = ±30 ppm	<b>30 =</b> ±30 ppm	<b>H</b> = -30° / +85°C				
	<b>50</b> = ±50 ppm	<b>50</b> = ±50 ppm	K = -40° / +85°C				

<sup>\*</sup> Note: Not all combinations are possible, please consult us.







## **OUTLINE DIMENSIONS**

