



anderson electronics, llc

A Lokos Electronics Company



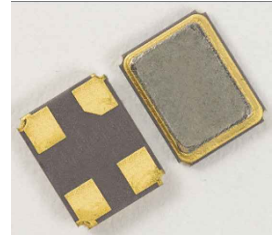
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AE 133 Series Surface Mount Crystal 2.5 x 2.0 x 0.7 mm

Part Numbering Definition Guide: AE-133-A-2-3060-2-20-16M0000								
Example	AE	133	A	2	3060	2	20	16M0000 (Freq. in MHz)
Oscillation Mode			A			Fundamental		
Calibration Tolerance			1			± 10 ppm		
			2			± 20 ppm		
			3			± 30 ppm		
			5			± 50 ppm		
			Z			± Custom (Specify)		
Operating Temperature			5505		Custom (-55°C to +105°C)			
			4085		-40° to +85°			
			3060		-30° to +60°			
			2070		-20° to +70°			
Temperature Stability					5	± 50 ppm		
					3	± 30 ppm		
					2	± 20 ppm		
					1	± 10 ppm		
Load Capacitance					18	18 pf		
					20	20 pf		
					30	30 pf		
					32	32 pf		
					SE	Series		
					XX	Custom (I.E. .08 pf)		



FEATURES:

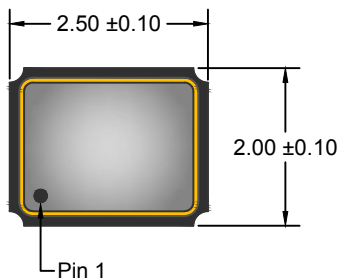
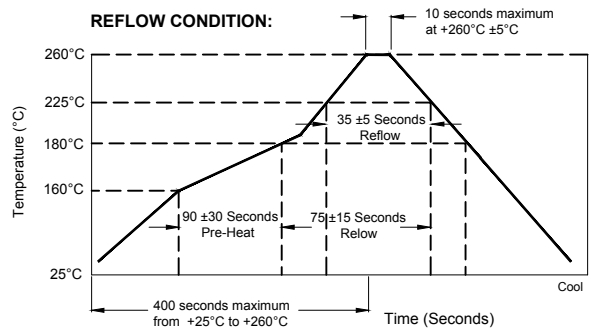
Frequency Range 16.0 MHz - 60.0 MHz
Seam sealed ceramic package,
low cost, frequency ranges that
exhibits excellent technical performance
in the aspects of frequency stability,
aging, precision and reliability.
Tape/Reel is compliant with EIA 481.
ROHS Compliant/Pb-Free

APPLICATIONS:

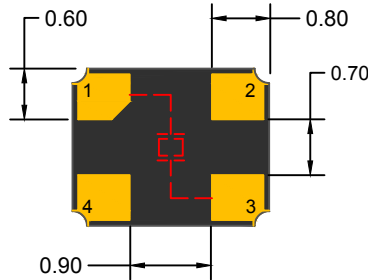
This ceramic AE133 is for Bluetooth,
wireless communications, mobile
phones, and high density applications.

Parameters	Minimum	Nominal	Maximum	Units
Shunt Capacitance			7.0	pF
Drive Level		10	100	uW
Aging / year	-5.0		+5.0	Units
Insulation Resistance	500			(M) ohms

Frequency Range (MHz)	Series Resistance (ESR)	Mode of Operation
16.000 - 20.000	80 Ohms maximum	Fundamental
20.000 - 30.000	60 Ohms maximum	Fundamental
30.000 - 35.000	50 Ohms maximum	Fundamental
Greater than 35.000	40 Ohms maximum	Fundamental

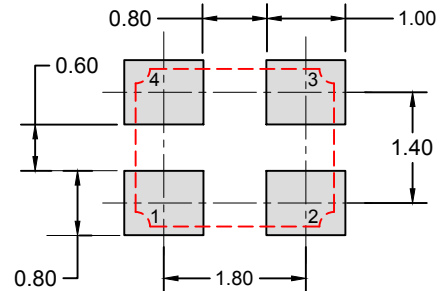


Top View:



Bottom View:

Pin	Connection
1	Crystal
2	Ground
3	Crystal
4	Ground



Recommended Land Pattern

Dimensions in Units: mm