



# anderson electronics, llc

A Lokos Electronics Company



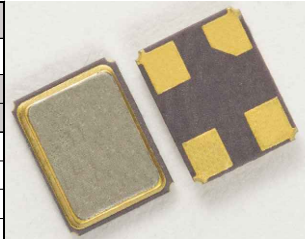
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## AE 135 Series Surface Mount Crystal 3.2 x 2.5 x 0.8 mm

Part Numbering Definition Guide: AE-135-A-2-4085-1-18-20M0000								
Example	AE	135	A	2	4085	1	18	20M0000 (Freq. in MHz)
Oscillation Mode			A			Fundamental		
			B			3rd Overtone		
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 12.0 MHz - 150.0 MHz  
Small seam sealed package,  
low in height, exhibits excellent technical  
performance in the aspects of frequency  
stability, aging, precision and reliability.  
Available for fundamental and 3rd  
overtone modes.  
Tape/Reel is compliant with EIA 481.  
ROHS Compliant/Pb-Free

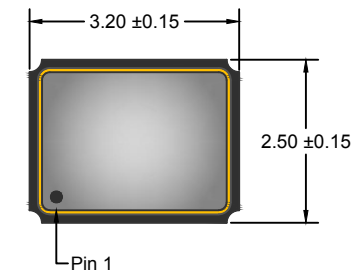
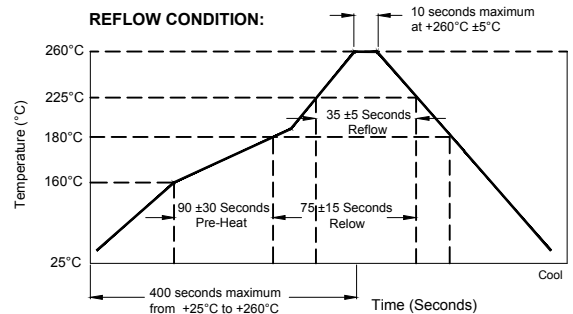
### APPLICATIONS:

This ceramic AE135 is for Bluetooth,  
PMCIA, wireless applications,

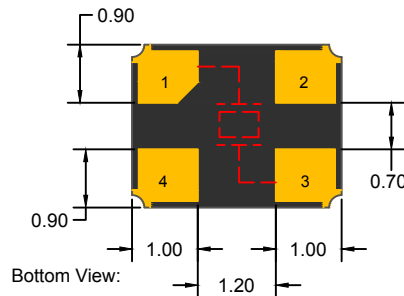
Parameters	Minimum	Nominal	Maximum	Units
Shunt Capacitance			7.0	pF
Drive Level		10	100	µW
Aging / year	-5.0		+5.0	Units
Insulation Resistance	500			(M) ohms

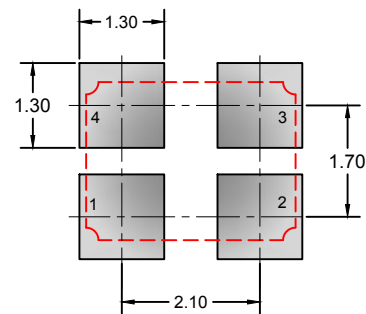
Frequency Range (MHz)	Series Resistance (ESR)	Mode of Operation
12.000 - 20.000	100 Ohms maximum	Fundamental
20.000 - 60.000	60 Ohms maximum	Fundamental
60.000 - 80.000	90 Ohms maximum	3rd Overtone
80.000 - 100.00	90 Ohms maximum	3rd Overtone
100.00 - 150.00	100 Ohms maximum	3rd Overtone



Top View:



Bottom View:



Recommended Land Pattern



Pin	Connection
1	Crystal
2	Ground
3	Crystal
4	Ground

Dimensions in Units: mm