

Crystal Product Brief – AE35: TO-5



Quartz Crystal

anderson electronics, Inc.



Low Profile Precision Crystal High Shock and Vib Performance Custom Frequencies And Tolerances

Features

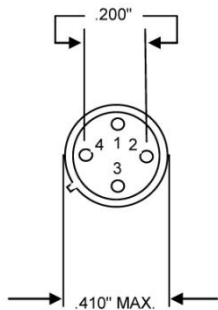
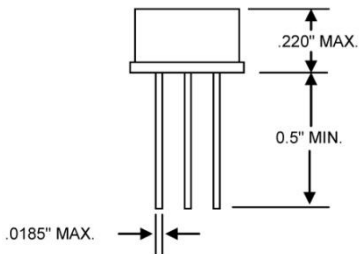
- Frequency range: 4 to 200 MHz
- Custom Frequencies & Tolerances
- Fundamentals up to 200 MHz
- Wide Temperature range
- Industry Standard footprint
- Mil-PRF Screening Available

Applications

- Networking / Communications
- SD/HD video clock generation
- Microprocessor Clocking
- FPGA/ASIC clock generation
- Precision Filters and Oscillators

ELECTRICAL SPECIFICATIONS:		
Frequency Range	4.0 to 225.0 MHz	AT Fundamental
	16.000 to 125.000 MHz	AT 3rd Overtone
	50.000 to 200.000 MHz	AT 5th Overtone
Holder	TO-5 (HC-35/u), Cold Weld	
Load Capacitance	Series to 50 pF, 15 pF, 18 pF, 20 pF (Typical)	
Calibration Tolerance	+/- 20 ppm, max (Typical)	
	Optional: +/-10 PPM to +/-100 PPM	
Operating Temperature Range	-20 to +70 C (Typical)	
	Optional: -40 to +85 C, -55 to +105 C	
Stability vs Temp. (Ref to 25C)	+/- 20 PPM, max, over -20 to +70 C (Typical)	
	Optional: +/-10 PPM to +/-100 PPM	
Aging	+/- 3 PPM / 1st Yr max, at 25 C average ambient	
Series Resistance (ESR)	Fund - 4.0 to 4.99 MHz	100Ω (max)
	Fund - 5.0 to 5.99 MHz	75Ω (max)
	Fund - 6.0 to 7.59 MHz	60 Ω (max)
	Fund - 7.6 to 9.99 MHz	50 Ω (max)
	Fund - 10.0 to 225.0 MHz	25 Ω (max)
	3rd OT - 10.0 to 15.99 MHz	50 Ω (max)
	3rd OT - 16.0 to 100.0 MHz	40 Ω (max)
5th OT - 50.0 to 150.0 MHz	60 Ω (max)	
Drive Level	1000 uW, max / 100 uW, correlation	
Shunt Capacitance	7.0 pF maximum	
Motional Capacitance	Customer specified if required	
Packaging	Bulk / Tray	

AE35 (HC35/u, TO-5)



Bottom View

Pins 1 & 3: Crystal
Pins 2 & 4: No Connection

Specifications are subject to change without notice

Part Number Definition Guide								
Example	AE	N	A	3	F	5	C	20M0000 (Freq in MHz)
Package	N							HC35 / TO-5
Mode / Cut	A							Fundamental AT
	B							3rd Overtone AT
	C							5th Overtone AT
Calibration Tolerance	1							+/- .0005% (+/- 5 PPM)
	2							+/- .001% (+/- 10 PPM)
	3							+/- .002% (+/- 20 PPM)
	5							+/- .003% (+/- 30 PPM)
	6							+/- .005% (+/- 50 PPM)
	9							Custom
Temperature Range	A							-55 TO +125C
	B							-55 TO + 105C
	C							-40 TO +85C
	F							-20 TO +70C
	G							0 TO +50C
	Z							Custom
Temperature Tolerance	2							+/- .005% (+/- 50 PPM)
	3							+/- .003% (+/- 30 PPM)
	5							+/- .002% (+/- 20 PPM)
	6							+/- .001% (+/- 10 PPM)
	7							+/- .0005% (+/- 5 PPM)
9							Custom	
Load Capacitance	A							A = 10 pF
	B							B = 18 pF
	C							C = 20 pF
	S							S = Series
	Z							Z = Other (Specify)
Note: Some FN combinations or specifications may not be available at all frequencies								