

Crystals

Series **CR60B/U**

Fre Technologies provides the most comprehensive range of crystal components available. From standard microprocessors to custom-made crystals, Fre Technologies engineers and salespeople are dedicated to providing the best technical support and services possible.



Part Numbering Example: **CR60B/U - A2 B2 C2 180 - 3.579545 D18 - 3**

CR60B/U	A1*	B2	C2	180	3.579545	D18	-3
SERIES	OPERATING TEMP.	STABILITY	TOLERANCE	RESISTANCE	FREQUENCY	LOAD CAP.	OVERTONE
	A1 = -40°C ~ +85°C	B1 = ±100	C1 = ±100	SEE CHART		D16,18,20,ETC.	BLANK: FUND.
	A2 = -55°C ~ +105°C	B2 = ± 50	C2 = ± 50	BELOW		DS = SERIES	-3: 3rd OT
	A3 = -55°C ~ +125°C	B3 = ± 30	C3 = ± 30				-5: 5th OT
		B4 = ± 10	C4 = ± 10				-7: 7th OT
							-BT: BT Cut

***NOTE:** The above ABC combinations cover basic specification options. We tailor our crystal specifications to meet customer requirements. Please contact our sales department if you don't see exactly what you need.

Specifications:

Frequency Range: 1.8432 ~ 200.000 MHz
Custom crystals available.

Operating Temperature: A1 = -40°C ~ +85°C *Standard*
A2 = -55°C ~ +105°C
A3 = -55°C ~ +125°C

Frequency Stability: ± 100 ppm
± 50 ppm *Standard*
± 30 ppm
± 10 ppm

Frequency Tolerance: ± 100 ppm
(at 25°C) ± 50 ppm *Standard*
± 30 ppm
± 10 ppm

Load Capacitance: Standard 18 pF or series.
Please specify your required load.

Resistance: Maximum resistance corresponds to frequency.
See chart below.

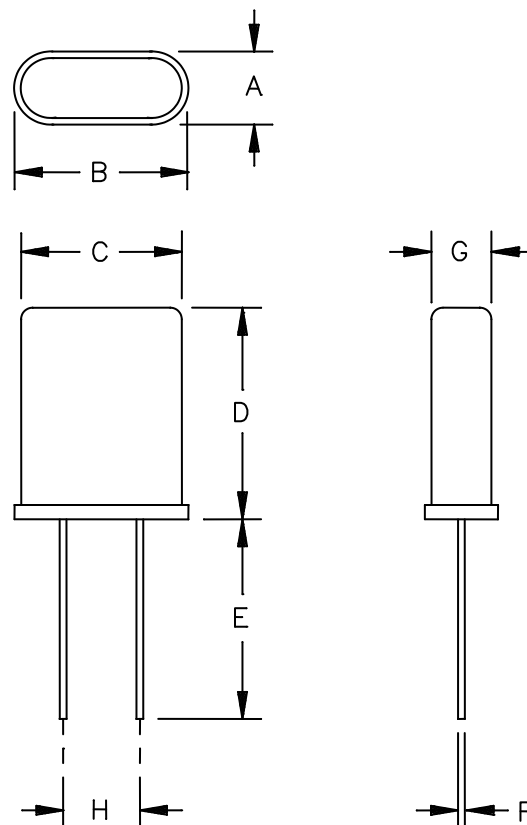
Standard: Mode: Fundamental, 3rd, 5th, or 7th Overtone
Shunt Capacitance: 7 pF Max
Aging: ± 5 ppm/year
Drive Level: 1.0 mW Max

Optional Features: Formed Leads
Vinyl Sleeves
Insulator Pads
Third Lead
Radial Tape and Reel (1K per Reel)

Resistance Chart: All resistances are maximum values.

EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND CUT

Frequency MHz	ESR(Ω)	Mode/cut	Frequency MHz	ESR (Ω)	Mode/cut
1.8432~1.999	650 Max	Fund./AT	5.000~5.999	75 Max	Fund./AT
2.000~2.399	550 Max	Fund./AT	6.000~6.999	50 Max	Fund./AT
2.400~2.999	350 Max	Fund./AT	7.000~7.999	40 Max	Fund./AT
3.000~3.199	250 Max	Fund./AT	8.000~9.999	35 Max	Fund./AT
3.200~3.499	200 Max	Fund./AT	10.000~12.999	30 Max	Fund./AT
3.500~3.599	180 Max	Fund./AT	13.000~32.768	25 Max	Fund./AT
3.600~3.899	150 Max	Fund./AT	24.000~29.999	60 Max	3rd Overtone/AT
3.900~3.999	120 Max	Fund./AT	30.000~74.999	40 Max	3rd Overtone/AT
4.000~4.099	100 Max	Fund./AT	75.000~119.999	80 Max	5th Overtone/AT
4.100~4.999	80 Max	Fund/AT	120.000~150.000	100 Max	5th Overtone/AT



Ltr	Inches		mm	
	Min	Max	Min	Max
A	---	.183	---	4.65
B	---	.435	---	11.05
C	---	.402	---	10.21
D	---	.530	---	13.46
E	.500	---	12.70	---
F	.016	.019	0.41	0.48
G	---	.150	---	3.81
H	.184	.200	4.67	5.08

Note 1: Not all combinations of the above tolerances, stabilities, and temperature ranges are available. Consult the factory if your requirement is not standard.