

Product Specification



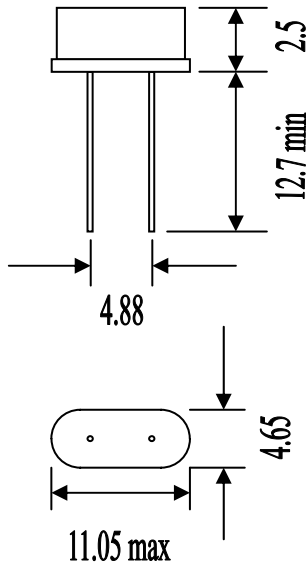
This product is certified to comply with the RoHS Directive 2002/95/EC.



HC493 Crystal



- 11.05x4.65x2.5mm case
- Metal lid, low profile
- Industry standard
- Resistance welded
- Through-hole
- Wide frequency range
- Tight tolerance



Specification

Frequency range	3.2 ~ 100MHz
Adjustment@25°C	See Table 2
Temp. Stability	See Table 1
Temp. range	See Table 1
ESR	3.20 ~ 3.79MHz 150Ω
	3.80 ~ 4.49MHz 120Ω
	4.50 ~ 5.99MHz 80Ω
	6.00 ~ 7.99MHz 70Ω
	8.00 ~ 9.99MHz 60Ω
	10 ~ 11.99MHz 50Ω
	12 ~ 15.99MHz 40Ω
	16 ~ 19.99MHz 25Ω
	20 ~ 35MHz 20Ω (Fundamental)
	25 ~ 39.99MHz 70Ω (3 rd overtone)
	40 ~ 100MHz 60Ω (3 rd overtone)
Load capacitance	See Table 3
Shunt capacitance	7.0pF max.
Drive level	10uW typ. 100uW max.
Storage temp.	-40 ~ +85°C
Ageing	5ppm/year max.

Ordering Code Guide

Series Code	Frequency	Specification	Holder Type	RoHS
X	xxMxxx	G C B E	493	*

Magna use a 4 lettering coding system for defining standard specifications as shown below. Where other parameters are specified (such as C1 or pullability) then a customer specific datasheet will be produced. Other temperature ranges, stabilities, adjustments and load capacitances are available. Please contact us for advice.

1 st Letter	Temp. range	See Table 1
2 nd Letter	Temp. stability	See Table 1
3 rd Letter	Adjustment tolerance	See Table 2
4 th Letter	Load capacitance	See Table 3

Please note that not all combinations of temperature and stability are possible. Please see Table 1 for guide to availability.

* suffix denotes RoHS Compliant

Standard packing: Bulk

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Crystal Ordering Codes

Table 1: Temperature range v. Stability

Temp. Range & Stability		±3ppm	±5ppm	±7.5ppm	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
		K	J	H	G	F	E	B	C
0 ~ +50°C	J	✓	✓	✓	✓	✓	✓	✓	✓
-5 ~ +55°C	H	✓	✓	✓	✓	✓	✓	✓	✓
-10 ~ +60°C	G	-	✓	✓	✓	✓	✓	✓	✓
-20 ~ +70°C	E	-	✓	✓	✓	✓	✓	✓	✓
-30 ~ +80°C	C	-	-	✓	✓	✓	✓	✓	✓
-40 ~ +85°C	M	-	-	-	✓	✓	✓	✓	✓

Other temperature ranges and stabilities are available.

Table 2: Adjustment tolerance

±5ppm	±10ppm	±15ppm	±20ppm	±25ppm	±30ppm	±50ppm	±100ppm
J	G	F	E	D	B	C	A

Other adjustment tolerances are available.

Table 3: Load capacitance

10pF	12pF	16pF	18pF	20pF	30pF	32pF	Series
A	R	K	Q	C	E	F	S

Other load capacitances are available. Min. 6pF