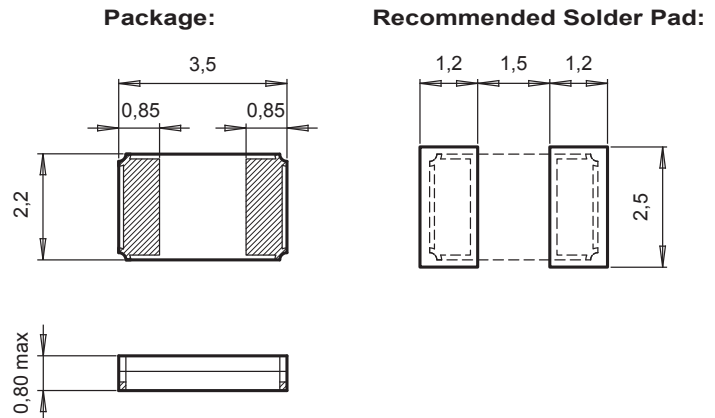


CC6F-T1A

Inverted Mesa AT-Cut Crystal 70 MHz – 250 MHz



DIMENSIONS



All dimensions in mm typical

APPLICATIONS

Telemetry
Optical Network
Airborne Equipment
Radio Communications
TCXO, VCTCXO, VCXO
Health Care and Medical

DESCRIPTION

The CC6F-T1A is a high frequency SMT Quartz Crystal Unit that incorporates an Inverted Mesa AT-cut Resonator. It operates under vacuum in a hermetically sealed ceramic package with ceramic lid.

FEATURES

Outstanding hermetic sealing with gold-tin preform.
High stability and low aging guaranteed by hermetic sealing.
Available for extended operating temperature range.
Operates in fundamental mode.
High shock and vibration resistant.
100% Pb-free, RoHS-compliant.

ELECTRICAL CHARACTERISTICS AT 25°C

Frequency Range	F_L	70 – 250	MHz
Load capacitance ¹⁾	C_L	10.0 / ∞	pF
Frequency tolerance at +25°C ²⁾	$\Delta F/F$	± 50	ppm
Frequency vs. temperature ³⁾ TA: -40 to +85°C TB: -40 to +125°C TC: -55 to +125°C	$\Delta F/F_0$	± 30 ± 80 ± 100	ppm
Drive level typ./max.	P	50 / 100	μW
Insulation resistance min.	R_i	500	M Ω
Aging first year max.	$\Delta F/F$	± 3	ppm

1) Other load capacitances on request; e.g. C_L : 7.0 pF.

2) Tighter frequency tolerances on request; e.g. ± 20 ppm.

3) Tighter thermal stability on request; e.g. ± 10 ppm from 0°C to +55°C.

Frequency	R_S typ. F_{min} / F_{max}	C_1 typ. F_{min} / F_{max}	C_0 typ.
70.00 MHz to 99.99 MHz	30 Ω / 22 Ω	2.7 fF / 5.1 fF	2.4 pF
100.00 MHz to 139.99 MHz	22 Ω / 18 Ω	5.1 fF / 5.4 fF	2.7 pF
140.00 MHz to 199.99 MHz	18 Ω / 15 Ω	5.4 fF / 5.7 fF	2.9 pF
200.00 MHz to 250.00 MHz	15 Ω / 12 Ω	5.7 fF / 5.9 fF	3.2 pF

STANDARD FREQUENCIES

Frequencies				
77.760 MHz	100.000 MHz	106.250 MHz	125.000 MHz	128.000 MHz
155.520 MHz	160.000 MHz	200.000 MHz	213.600 MHz	250.000 MHz
Other frequencies on request				

ENVIRONMENTAL CHARACTERISTICS

	Conditions
Storage temp. range	-55 to +125°C
TA Operating temperature range	-40 to +85°C
TB Extended operating temp. range	-40 to +125°C
TC Extended operating temp. range	-55 to +125°C
Shock resistance	5000 g, 0.3 ms, ½ sine
Vibration resistance	20 g / 10–2000 Hz

TERMINATIONS AND PROCESSING

Type	Termination	Processing
CC6F-T1A	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

ORDERING INFORMATION

	C C 6 F - T 1 A 155.520 MHz ∞ pF ±50 ppm TA QI
Ceramic package	Frequency F_L
Ceramic lid	Load capacitance C_L
Package size	10.0 pF
6 = 3.5 x 2.2 x 0.80 mm	∞ pF
AT-cut inverted mesa	Other C_L on request
SMT package	Frequency tolerance
Au flashed pads	±50 ppm
Pads on both ends	Tighter freq. tolerances on request
	Temperature range
	TA = -40 to +85°C (Standard)
	TB = -40 to +125°C
	TC = -55 to +125°C
	Qualification
	QI = Industrial Grade (Standard)
	QS = Custom Specification

A unique part number will be generated for each product specification, i.e:	
20xxxx-MG01	1'000 pcs (in 12 mm tape on 7" reel)
20xxxx-MG03	3'000 pcs (in 12 mm tape on 7" reel)
20xxxx-EA00	xxx pcs (in ESD plastic tray)

All specifications subject to change without notice.



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