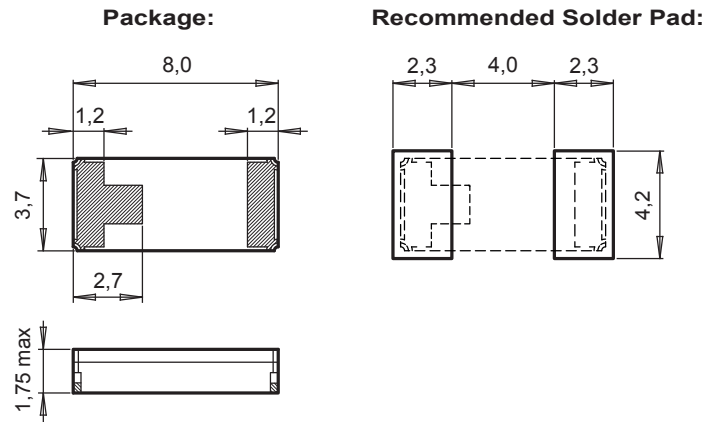


CC1F-T1A

Inverted Mesa AT-Cut Crystal 30 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 CC1F-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	30 – 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.

Standard Frequencies	F_L	50.000	155.520	MHz
Series resistance typ./max.	R_S	15 / 50	15 / 35	Ω
Motional capacitance typ.	C_1	5.6	5.6	fF
Static capacitance typ.	C_0	2.0	2.9	pF

STANDARD FREQUENCIES

Frequencies			
50.0000 MHz	77.7600 MHz	100.0000 MHz	106.2500 MHz
125.0000 MHz	155.5200 MHz	166.6286 MHz	200.0000 MHz
207.3600 MHz	212.5000 MHz	250.0000 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
CC1F-T1A	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

ORDERING INFORMATION

CC1F-T1A 155.520 MHz ∞ pF ±50 ppm TA QI	
Ceramic package	Frequency F_L
Ceramic lid	Load capacitance C_L
Package size 1 = 8.0 x 3.7 x 1.75 mm	10.0 pF ∞ pF Other C_L on request
AT-cut inverted mesa	Frequency tolerance
SMT package	±50 ppm Tighter freq. tolerances on request
Au flashed pads	Temperature range
Pads on both ends	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-ML01	1'000 pcs (in 16 mm tape on 7" reel)
20xxxx-EA00	xxx pcs (in ESD plastic tray)

All specifications subject to change without notice.



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