

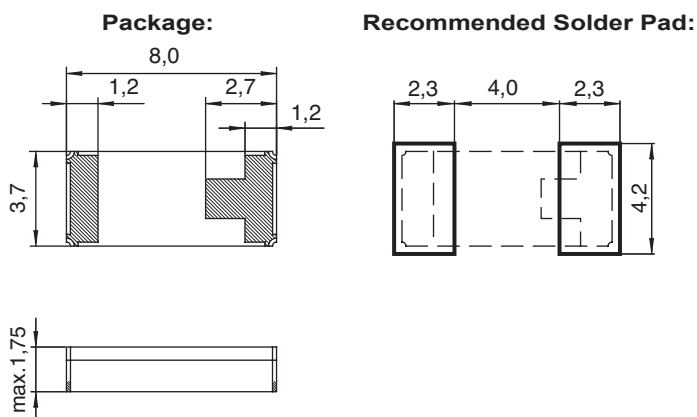
CC1F-T1A

Inverted Mesa AT Crystal 30 MHz – 250 MHz



100% leadfree, RoHS - compliant

DIMENSIONS



All dimensions in mm typical

SMT ceramic package height 1.75 mm
Fundamental mode up to 250MHz
Inverted Mesa Technology
Ind. and Ext. temperature ranges
High stability and low aging
High shock and vibration resistance
Hermetically sealed
Ultra low MSL
Excellent solderability
Swiss made quality
Customer specification on request

DESCRIPTION:

This quartz Crystal in SMD ceramic package has been specially designed with Micro Crystal photolithographic process for surface mount using infrared, vapor phase or epoxy technics

APPLICATIONS:

- TCXO, VCTCXO, VCXO
- Optical network
- Satellite communications
- Airborne equipments

The crystals are supplied in trays (100 crystals per tray).

For pick-and-place equipment, the parts are available in 16mm tapes:

- 7" with 1'000 crystals
- 10" with 2'000 crystals

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 versus temperature ³⁾ TB: -40 to +85°C TC: -55 to +125°C	$\Delta F/F_0$	+/-30 +/-100	ppm
Drive level max.	P	100	μW
Insulation resistance min.	R_i	500	MΩ
Aging first year max.	$\Delta F/F$	+/-3	ppm

Frequency [MHz]	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

1) Other load capacitances on request.

2) Tighter and wider frequency tolerances on request.

3) Values for other frequencies consult factory.

STANDARD FREQUENCIES:

Frequency MHz					
50.0000	77.7600	100.0000	106.2500	125.000	155.5200
166.6286	200.0000	207.3600	212.5000	250.0000	
Other frequencies from 30 MHz up to 250 MHz on request					

**ENVIRONMENTAL
CHARACTERISTICS:**

	Conditions
Storage temp. range	-55 to +125°C
TB Operating temperature range	-40 to +85°C
TC Extended oper. 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	For SMD mounting Au plated pads	Reflow soldering +260°C / 20 s max.

**PRODUCT DESCRIPTION AND
ORDERING INFORMATION:**

CC1F-T1A 155.520 MHz ∞ pF +/-50ppm TB QI

Frequency F_0 _____

C_L Load Capacitance _____

10.0 pF
 ∞ pF

Frequency tolerance _____

+/- 50 ppm
+/- 100 ppm

Temperature Range _____

TB = -40 to +85°C (Standard)
TC = -55 to +125°C

Optional:
if not defined,
'Standard' will apply

Qualification _____

QI = Industrial (Standard)
QS = Custom Specification

A unique part number will be generated for each product specification, i.e:

20xxxx-ML01	1'000 pcs (in 16mm tape on 7" reel)
20xxxx-PL02	2'000 pcs (in 16mm tape on 10" reel)
20xxxx-DA00	xxx pcs (in foam tray)

Please contact us.

All specifications subject to change without notice.



Micro Crystal AG
Mühlestrasse 14
CH-2540 Grenchen
Switzerland

Tel. +41 32 655 82 82
Fax +41 32 655 82 83
sales@microcrystal.com
www.microcrystal.com