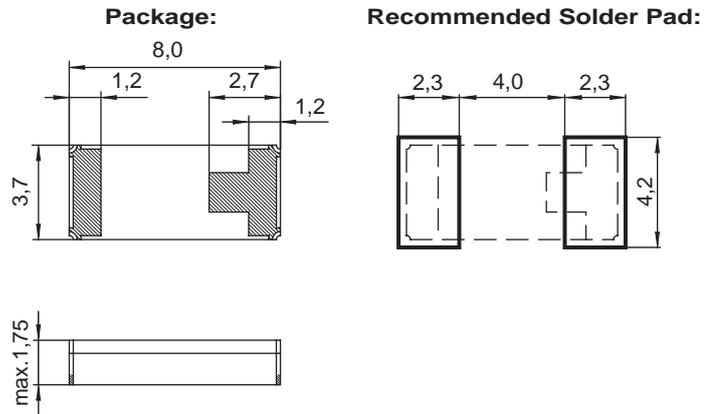


CC1F-T1A

Inverted Mesa AT Crystal 30 MHz – 250 MHz



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 | M Ω |
| 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 | 125.0000 | 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.



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