



ALL RIGHTS RESERVED. NO PORTION OF THIS PUBLICATION, WHETHER IN WHOLE OR IN PART, CAN BE REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPC TECHNOLOGY.

SPC-F005.DWG

REVISIONS

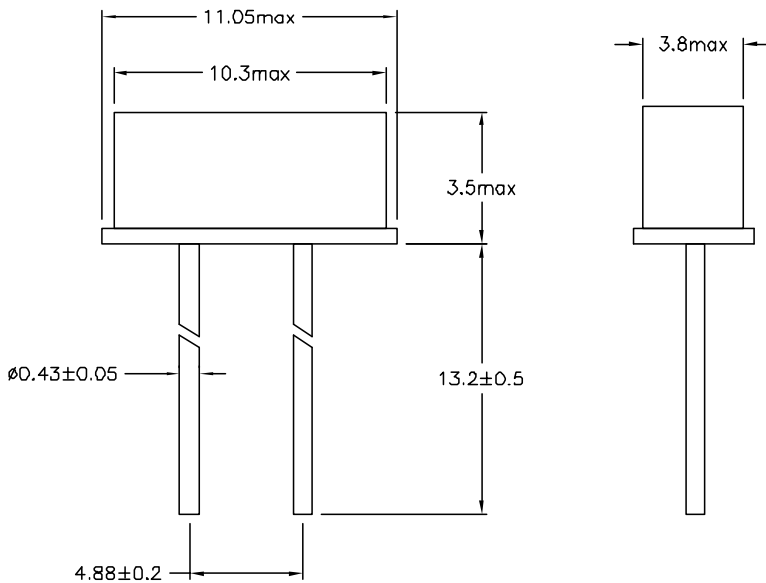
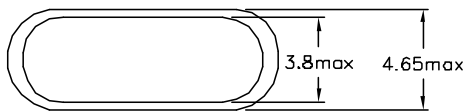
DOC. NO. SPC-F005 * Effective: 7/8/02 * DCP No: 1308

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
2022	A	RELEASED	JN	1/07/09	JWM	1/07/09	JWM	1/07/09



PARAMETERS:

No	DESCRIPTION	CONTENTS
1	Holder Type	HC-49US
2	Load Capacitance	18 pF
3	Frequency Tolerance at 25°C±3°C	±30 ppm
4	Frequency Tolerance in Operating Temperature Range	±30 ppm
5	Operating Temperature Range	-20°C ~ +70°C
6	Storage Temperature Range	-40°C ~ +85°C
7	Drive Level	≤ 50 μW
8	Shunt Capacitance	≥ 5.0 pF
9	Insulation Resistance	≥ 500M Ω
10	Test Impedance Meter	KH1200
11	Aging	±3ppm/Year



DISCLAIMER:
ALL STATEMENTS AND TECHNICAL INFORMATION CONTAINED HEREIN ARE BASED UPON INFORMATION AND/OR TESTS WE BELIEVE TO BE ACCURATE AND RELIABLE. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND ASSUME ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DRAWN BY:	DATE:
Jason Nash	1/07/09
CHECKED BY:	DATE:
Jeff McVicker	1/07/09
APPROVED BY:	DATE:
Jeff McVicker	1/07/09

DRAWING TITLE:			
Crystal Resonator			
SIZE	DWG. NO.	ELECTRONIC FILE	REV
A	Ta-1113	Ta-1113.dwg	A
SCALE:	NTS	U.Q.M.: INCHES [mm]	SHEET: 1 OF 2

PHYSICAL & ENVIRONMENTAL PARAMETERS:

No	DESCRIPTION	CONTENTS	Requirements
1	Vibration	10~55Hz 0.75mm amplitude, in 3 directions duration of 30 minutes.	No mechanical damage and the measured values shall meet electrical parameters.
2	Random Dropping	The crystal will be test by natural dropping to 30mm wooden board 3 times from high of 30 cm.	
3	Solder Stability	Dipped the terminals no closer than 2 mm into the solder bath at 260 ±5 for 10 ± 0.5 sec.	At least 95% of the terminal surface shall be coated by the solder
4	Resistance Solder Heat	Dipped the terminals up to 2 mm into the solder bath (260 ±5°C) for 5 sec, placed in a natural condition for 2 hours.	Measured values shall meet electrical parameters.
5	Thermal Shock	Temperature cycling from -40°C (30mins) to +85°C (30mins) was performed 3 times, then placed in a natural condition for 2 hours.	
6	Life Test (High Temperature)	Placed in a chamber (85 ±2°C) for 48 hours, then placed in a natural condition for 2 hours.	
7	Life Test (Low Temperature)	Placed in a chamber (-40 ±2°C) for 48 hours, then placed in a natural condition for 2 hours.	
8	Humidity	Placed in a chamber (Hum: 90~ 95% RH, Temp: 60 ±2°C) for 48 hours, then placed in a natural condition for 2 hours.	



Mfr P/N	Nominal Frequency	Equivalent Series Resistance	Oscillation Mode
MCRS003676F183000RR	3.6864Mhz	±200 Ω	AT-FUND
MCRS004000F183000RR	4.000MHz	±150Ω	AT-FUND
MCRS004096F183000RR	4.096MHz	±150Ω	AT-FUND
MCRS006144F183000RR	6.144MHz	±100 Ω	AT-3OT
MCRS010000F183000RR	10.000MHz	± 80Ω	AT-FUND
MCRS011059F183000RR	11.0592MHz	± 80Ω	AT-FUND
MCRS011289F183000RR	11.2896MHz	± 80Ω	AT-FUND
MCRS012000F183000RR	12.000MHz	± 80Ω	AT-FUND
MCRS012288F183000RR	12.288MHz	±80Ω	AT-FUND
MCRS013500F183000RR	13.500MHz	± 80Ω	AT-FUND
MCRS014745F183000RR	14.7456MHz	± 50Ω	AT-FUND
MCRS015000F183000RR	15.000MHz	± 50Ω	AT-FUND
MCRS016000F183000RR	16.000MHz	± 50Ω	AT-FUND
MCRS016384F183000RR	16.384MHz	±50Ω	AT-FUND
MCRS020000F183000RR	20.000MHz	±50Ω	AT-FUND
MCRS022118F183000RR	22.1184MHz	±50Ω	AT-FUND
MCRS025000F183000RR	25.000MHz	± 50Ω	AT-FUND
MCRS027000F183000RR	27.000MHz	± 50Ω	AT-FUND
MCRS029491F183000RR	29.4912MHz	± 50Ω	AT-FUND
MCRS032000F183000RR	32.000MHz	± 50Ω	AT-FUND
MCRS040000T183000RR	40.000MHz	±100Ω	AT-3OT

ALL RIGHTS RESERVED. NO PORTION OF THIS PUBLICATION, WHETHER IN WHOLE OR IN PART CAN BE REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPC TECHNOLOGY.

SIZE
A

DWG. NO.

Ta-1113

ELECTRONIC FILE

Ta-1113.dwg

REV
A

SPC-F005.DWG

DOC. NO. SPC-F005 * Effective: 7/8/02 * DCP No: 1388

SCALE: NTS

U.Q.M.: Millimeters

SHEET: 2 OF 2