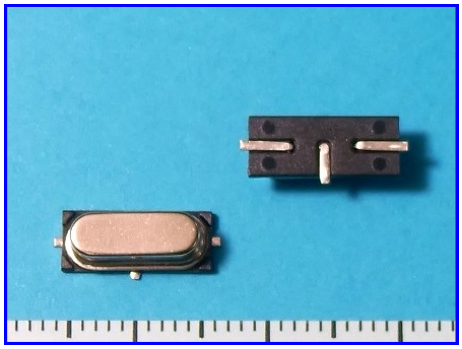
QUARTZ CRYSTAL UNIT IN HC-49/S SMD FORMED PACKAGE, SIZE 13 X 5MM WITH 3 PINS IN VARIOUS HEIGHTS.

01-CR1-33 / 39 / 53



PRODUCT FEATURES

- TRADITIONAL HC-49/S PACKAGE IN SMD FORM WITH 3 LEADS.
- MOST SUITABLE FOR LOW FREQUENCIES.
- RELIABLE AND HERMETICALLY SEALED METAL CAN PACKAGE.

APPLICATIONS

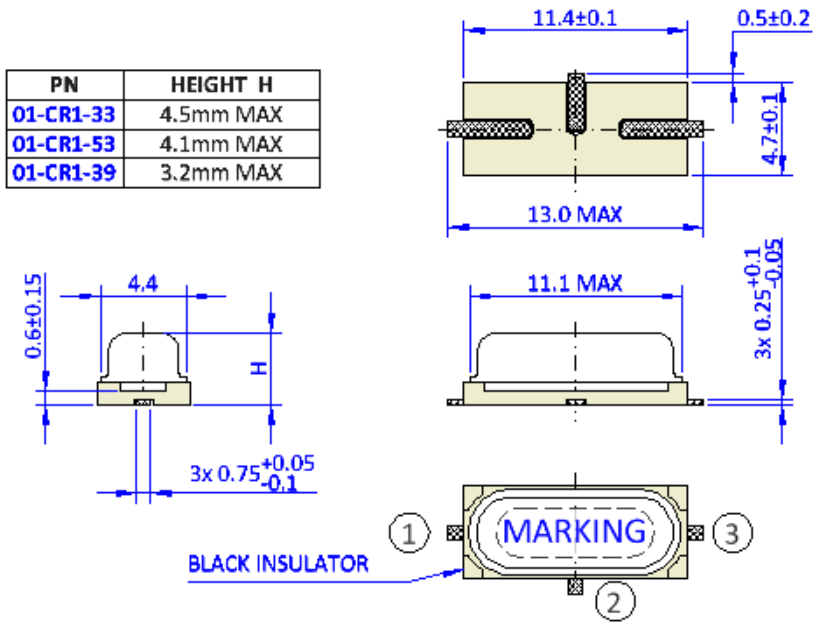
- CPU, MCU
- ETHERNET, MODEM
- AUDIO, TV, VIDEO
- CONSUMER PRODUCTS

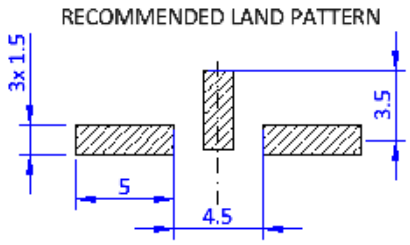
PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	SPECIFICATIONS	REMARKS
FREQUENCY RANGE	F_N	**3.2 ~ 90.0MHz**	FUNDAMENTAL UP TO 40MHZ
OPERATION MODE	—	FUNDAMENTAL / 3RD OVERTONE	OVERTONE ABOVE 30MHZ
FREQUENCY TOLERANCE	Δf/f	±10PPM TO ±50PPM	OTHER OPTIONS AVAILABLE
STABILITY OVER OPERATING TEMP.	T_C	±10PPM TO ±50PPM	DEPENDING ON OP. TEMPERATURE RANGE
OPERATING TEMPERATURE RANGE	T_{OP}	–20°C ~+70°C OR –40°C ~+85°C	OTHER OPTIONS AVAILABLE
LOAD CAPACITANCE	CL	6 TO 32PF OR SERIES	PLEASE SPECIFY LOAD CAPACITANCE
EQUIVALENT SERIES RESISTANCE	ESR	150Ω MAX	FUND MODE 3.2 ~ 3.5MHZ
		120Ω MAX	FUND MODE 3.6 ~ 3.9MHZ
		100Ω MAX	FUND MODE 4.0 ~ 5.9MHZ
		80Ω MAX	FUND MODE 6.0 ~ 6.9MHZ
		60Ω MAX	FUND MODE 7.0 ~ 7.9MHZ
		50Ω MAX	FUND MODE 8.0 ~ 9.9MHZ
		40Ω MAX	FUND MODE 10 ~ 15MHZ
		30Ω MAX	FUND MODE 16 ~ 29MHZ
		20Ω MAX	FUND MODE 30 ~ 40MHZ
		100Ω ~ 80Ω	3RD OT MODE 30 ~ 90MHZ
DRIVE LEVEL	DL	100µW TYP, 500µW MAX	DEPENDENT ON FREQUENCY AND MODE
AGING FIRST YEAR	$Δf/y_1$	±5PPM	@+25°C

MECHANICAL DIMENSIONS

PN	HEIGHT H
01-CR1-33	4.5mm MAX
01-CR1-53	4.1mm MAX
01-CR1-39	3.2mm MAX





PIN	FUNCTION
1	CRYSTAL
2	CASE [GND]
3	CRYSTAL

Metal can HC-49/S crystal package
SMD formed with 3 pins

HC49SM-P3 2019-05 D

No scale Unit: mm

QUARTZ CRYSTAL UNIT IN HC-49/S SMD FORMED PACKAGE, SIZE 13 X 5MM WITH 3 PINS IN VARIOUS HEIGHTS.

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ENVIRONMENTAL COMPLIANCE INFORMATION

- RoHS 6/6 compliant (Directive 2011/65/EC) and LEAD-FREE.
- Compliant to RoHS 2/3 (Directive 2015/863) (also called RoHS 10).
- HALOGEN-FREE per definition of IEC 61249-2-21 2033.
- None-use of SVHCs per REACH is currently given, continuously monitored and updated as the commission issues new releases.
- Product does not contain any Phthalates (PHs).
- Product does not contain PVC (Polyvinyl Chloride).
- Product does not contain PFOS/PFOA nor being same used to manufacture the components of this product.
- Moisture sensitivity level (MSL) 1 per J-STD-020C.

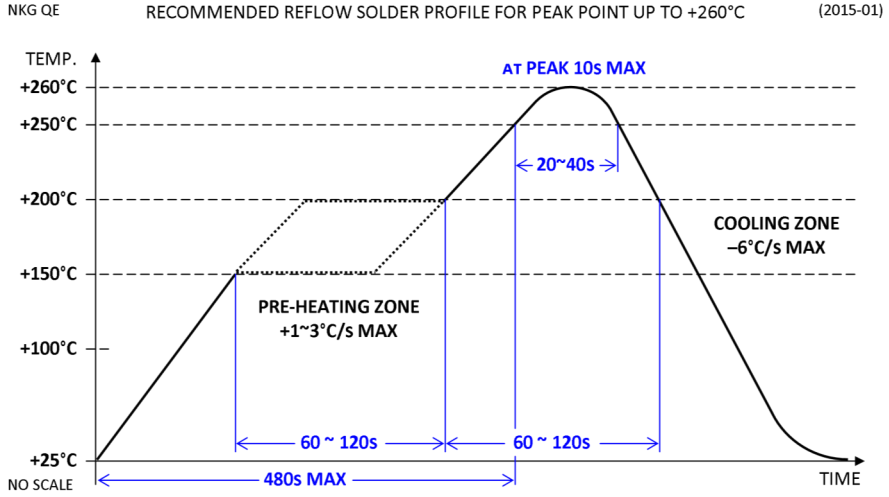
2011/65/EU COMPLIANT RoHS 2015/863 COMPLIANT

Pb

HALOGEN FREE HF IEC 61249-2-21 2003

SVHCs MONITORED REACH EC 1907/2006

SOLDERING RECOMMONDATIONS



- Pre-heating at 150~180°C recommended.
- Peak temperature shall be kept within ±5°C.
- For other procedures refer to IEC 60068-2-20.
- Pb-free process requirements per J-STD-020 can be applied for above stated peak temperature.

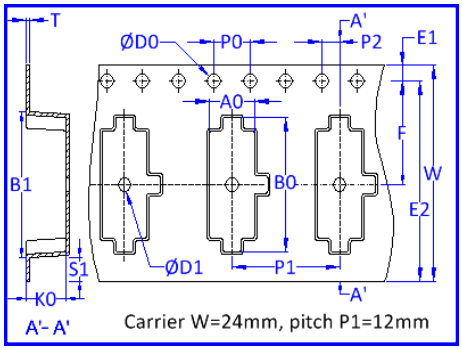
MANUAL SOLDERING USING SOLDER IRON:

- If manual soldering or repair is required maintain the solder iron tip at +350±10°C.
- Heat application time shall be kept at 3±1s.
- Hot gun may used with special care.

PACKAGING INFORMATION

- Packaging in Tape & Reel in compliance to EIA-481.
- QTY per reel: 1,000pcs

- Reel DIA A=330mm.
- Embossed Carrier tape width W = 24mm.
- Component pitch P1 = 12mm.



PART NUMBER SYNTAX

01-CR1-33-25M000-T18-3050E-EXT

- PART NUMBER FAMILY (represents product model, package size and No. of pins)
- NOMINAL FREQUENCY (with at least three digits after decimal point "M" for MHz)
- OPERATION MODE CODE (Blank = Fundamental / T = 3rd overtone)
- LOAD CAPACITANCE (numerical value or "00" for series)
- FREQUENCY TOLERANCE DESIGNATOR (numerical value (two digits) or 00 = 100ppm)
- FREQUENCY STABILITY DESIGNATOR (numerical value (two digits) or 00 = 100ppm)
- OPERATING TEMPERATURE RANGE CODE (i.e. C= -10~60°C, E= -20~70°C, M= -40~85°C)
- PART NUMBER EXTENSION (only for none-standard specifications or other options)

For more information please contact us.

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