

QUARTZ CRYSTAL UNIT IN HC-49/U THRU-HOLE PACKAGE, SIZE 11 X 4.5 X 13MM WITH 2 OR 3 LEADS.

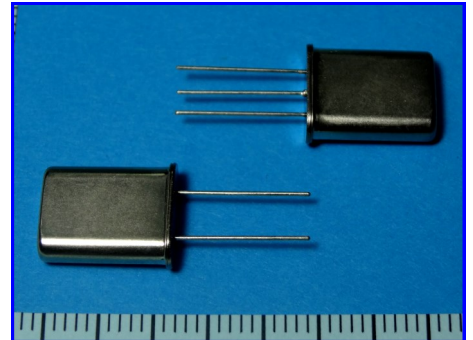
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PRODUCT FEATURES

- TRADITIONAL HC-49/U PACKAGE WITH 2 OR 3 LEADS, SMD FORM AVAILABLE.
- MOST SUITABLE FOR LOW FREQUENCIES.
- RELIABLE AND HERMETICALLY SEALED METAL CAN PACKAGE.

APPLICATIONS

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



PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	SPECIFICATIONS	REMARKS
FREQUENCY RANGE	F_N	1.8432 ~ 150.0MHZ	FUNDAMENTAL UP TO 40MHZ
OPERATION MODE	—	FUNDAMENTAL / 3RD AND 5TH OT	OVERTONE ABOVE 20MHZ
FREQUENCY TOLERANCE	$\Delta f/f$	± 20 PPM, ± 30 PPM, ± 50 PPM	OTHER OPTIONS AVAILABLE
STABILITY OVER OPERATING TEMP.	T_C	± 20 PPM, ± 30 PPM, ± 50 PPM	DEPENDING ON OP. TEMPERATURE RANGE
OPERATING TEMPERATURE RANGE	T_{OP}	$-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$ OR $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	OTHER OPTIONS AVAILABLE
LOAD CAPACITANCE	CL	6 TO 32PF OR SERIES	PLEASE SPECIFY LOAD CAPACITANCE
EQUIVALENT SERIES RESISTANCE	ESR	500~300Ω MAX	FUND MODE 1.8 ~ 2.9MHZ
		150~120Ω MAX	FUND MODE 3.0 ~ 4.0MHZ
		100Ω MAX	FUND MODE 4.0 ~ 4.5MHZ
		70Ω MAX	FUND MODE 4.5 ~ 4.8MHZ
		50Ω MAX	FUND MODE 5.0 ~ 5.9MHZ
		40Ω MAX	FUND MODE 6.0 ~ 9.9MHZ
		30Ω MAX	FUND MODE 10 ~ 12.5MHZ
		25Ω MAX	FUND MODE 12.5 ~ 40MHZ
		80Ω MAX	3RD OT MODE 20 ~ 100MHZ
		120Ω MAX	5TH OT MODE 100 ~ 150MHZ
DRIVE LEVEL	DL	100μW TYP, 1,000μW MAX	DEPENDENT ON FREQUENCY
AGING FIRST YEAR	$\Delta f/y_1$	± 5 PPM	@+25°C

MECHANICAL DIMENSIONS (FOR MORE PACKAGE OPTIONS SEE PAGE 3)

PN	01-CR1-01
PIN	HC49U-P2
1	CRYSTAL
2	CRYSTAL

PN	01-CR1-31
PIN	HC49U-P3
1	CRYSTAL
2	CASE [GND]
3	CRYSTAL

Metal can HC-49/U crystal package with 2 or 3 pins

HC49U-P2 / -P3 2019-05 C

No scale Unit: mm

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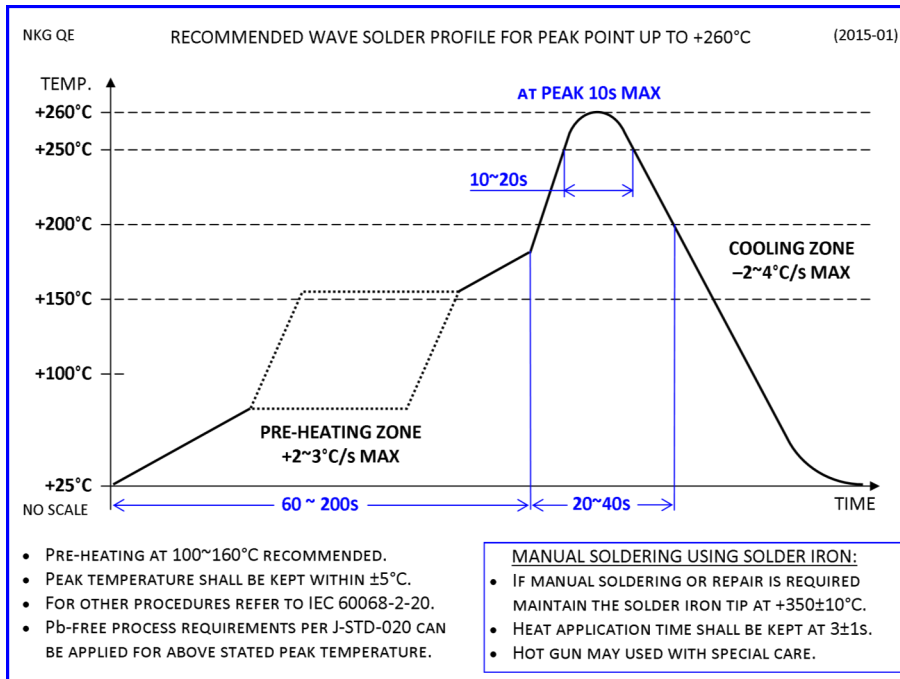
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ENVIRONMENTAL COMPLIANCE INFORMATION

- 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.

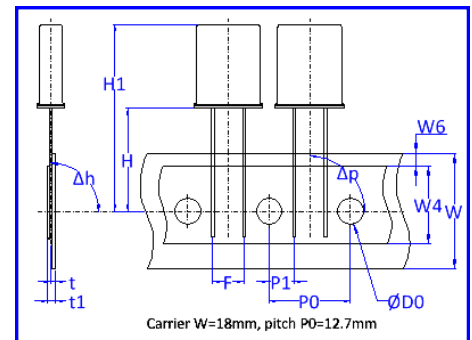


SOLDERING RECOMMENDATIONS



PACKAGING INFORMATION

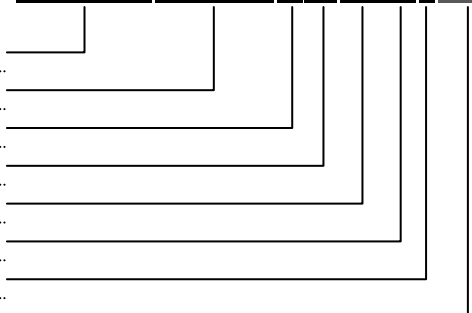
- PACKAGING IN BULK.
- QTY PER BOX: 1,000PCS
- SMD FORMED OPTION ON T&R
- QTY PER REEL: 500PCS
- THD OPTIONAL T&R OR AMMO.
- QTY: 1,000.
- COMPONENT PITCH P0 = 12.7MM.



PART NUMBER SYNTAX

- 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 / V = 5TH OVERTONE)
- LOAD CAPACITANCE (ACTUAL 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 SPECIFICATION OR OTHER OPTIONS)

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



FOR MORE INFORMATION PLEASE CONTACT US.

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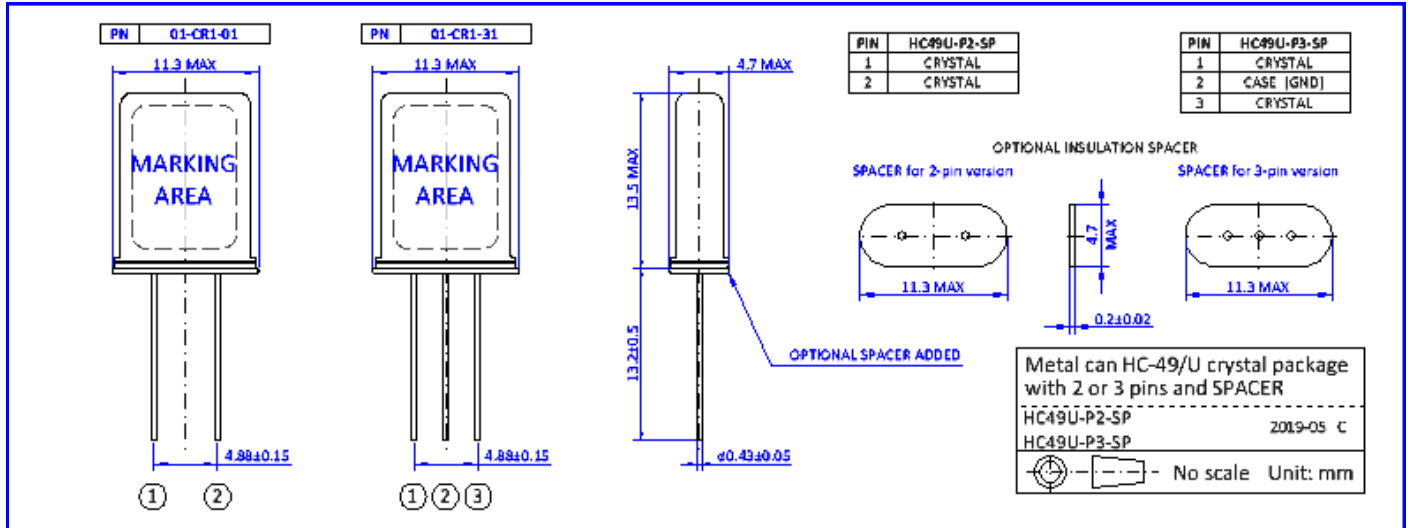
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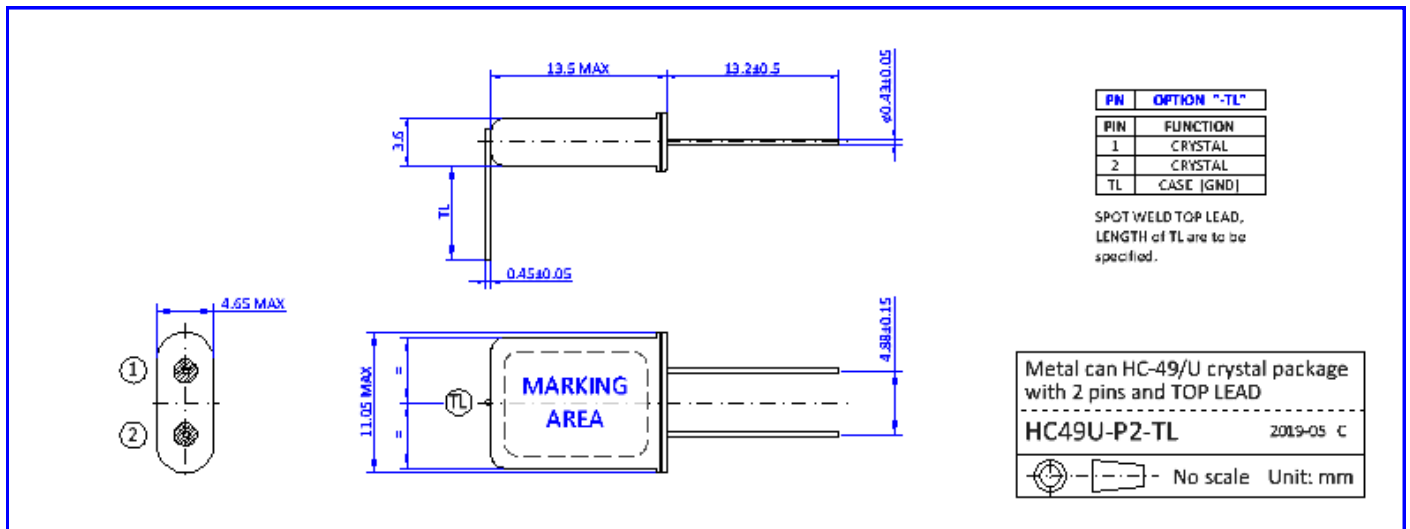
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MECHANICAL DIMENSIONS — OPTION WITH SPACER (PN EXTENSION “-SP”)



MECHANICAL DIMENSIONS — OPTION WITH TOP LEAD (PN EXTENSION “-TL”)



MECHANICAL DIMENSIONS — OPTION SMD FORMED PACKAGE (PN EXTENSION “-SMJ”)

