

CERAMIC RESONATOR UNIT WITH INBUILT LOAD CAPACITORS IN CERAMIC SMD PACKAGE, SIZE 6.0 X 3.0MM.

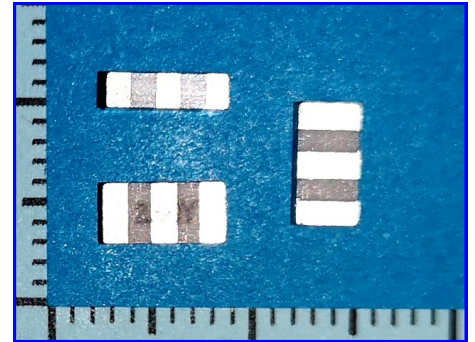
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PRODUCT FEATURES

- CERAMIC SMD CASE IN SIZE 6.0 X 3.0 X 1.8MM WITH 3 SOLDER PADS.
- INBUILT LOAD CAPACITORS, CIRCUIT DOES NOT REQUIRE EXTERNAL CAPACITORS.
- INDUSTRIAL OPERATING TEMPERATURE RANGE -40 TO $+85^{\circ}\text{C}$ AVAILABLE.
- EXTENDED OPERATING TEMPERATURE RANGE -40 TO $+125^{\circ}\text{C}$ AVAILABLE.

APPLICATIONS

- MICROPROCESSOR
- REMOTE CONTROL DEVICES
- PORTABLE DEVICES

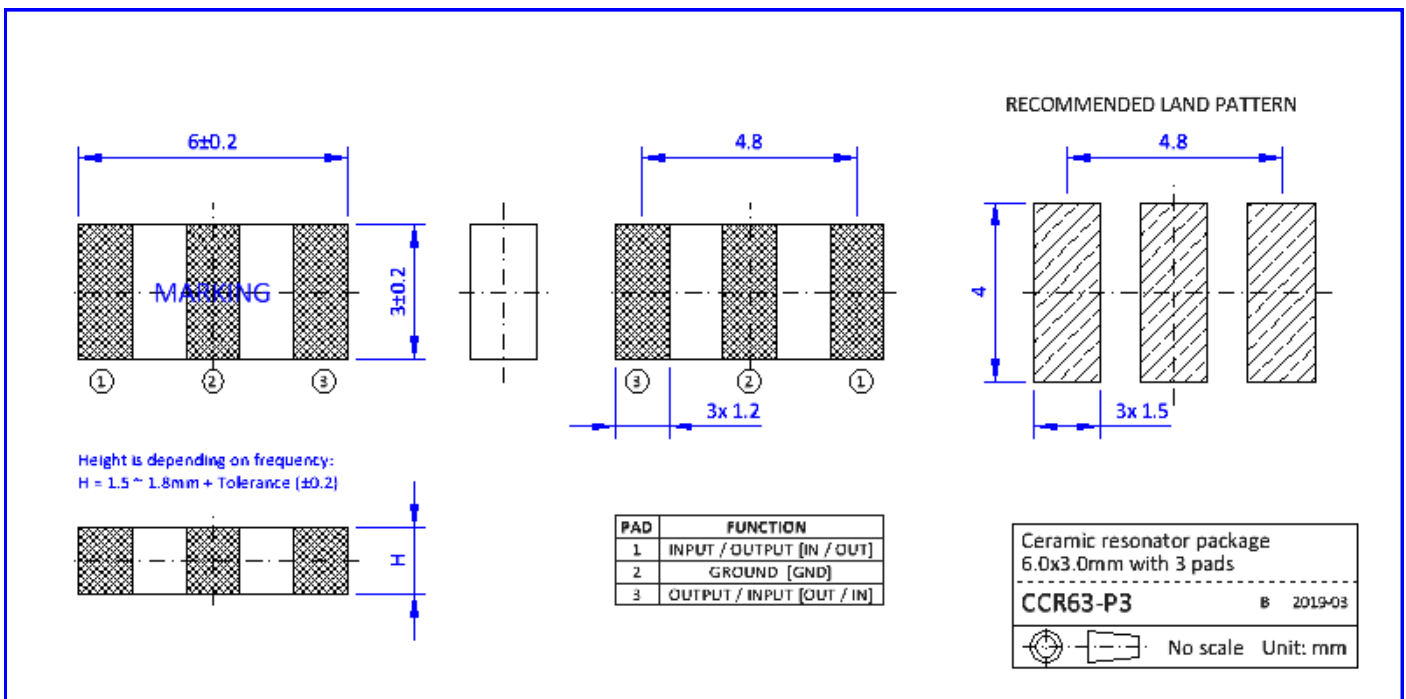


PRODUCT SPECIFICATIONS

PARAMETER	SYMBOL	SPECIFICATIONS	REMARKS
FREQUENCY RANGE	F_N	2.0 ~ 12.0MHz	NOTE 1
OSCILLATION MODE	—	THICKNESS SHEAR FUNDAMENTAL	—
FREQUENCY TOLERANCE	$\Delta f/F_N$	$\pm 0.5\%$ OR $\pm 0.3\%$	STANDARD / OPTION
STABILITY OVER OPERATING TEMP.	T_C	$\pm 0.3\%$	DEPENDENT ON OPERATING TEMP. RANGE
OPERATING TEMPERATURE RANGE	T_{OP}	$-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$ OR $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	EXTENDED RANGE $-40 \sim +125^{\circ}\text{C}$ AVAILABLE
AGING RATE OVER 10 YEARS	$\Delta f/y_{10}$	$\pm 0.3\%$	@ $+25^{\circ}\text{C}$
RESONANCE RESISTANCE	R_O	100 Ω MAX 50 Ω MAX 30 Ω MAX	2.000 ~ 2.999MHz 3.000 ~ 3.499MHz 3.500 ~ 12.000MHz
LOAD CAPACITORS (INBUILT)	C1 & C2	30pF (15; 22; 33; 39; 47pF) 15pF (5; 10; 22; 30; 33pF)	2.000 ~ 8.000MHz, NOTE 2 8.000 ~ 12.000MHz
RATED VOLTAGE	U_R	6.0V _{DC} OR 15.0V _{PP}	MAXIMUM DC OR AC OPERATING VOLTAGE
WITHSTANDING VOLTAGE	U_W	50.0V _{DC}	FOR 1 MINUTE MAXIMAL

NOTE 1: TYPICAL FREQUENCIES: 2.0MHz, 2.45MHz, 2.46MHz, 3.58MHz, 3.68MHz, 4.0MHz, 4.19MHz, 4.91MHz, 5.0MHz, 6.0MHz, 8.0MHz, 10.0MHz, 12.0MHz.
NOTE 2: SHOWN IS THE RECOMMENDED CAPACITOR VALUE, THE VALUES IN BRACKETS ARE OPTIONAL AVAILABLE LOAD CAPACITOR VALUES (SETUP IN MANUFACTURING READY).

MECHANICAL DIMENSIONS



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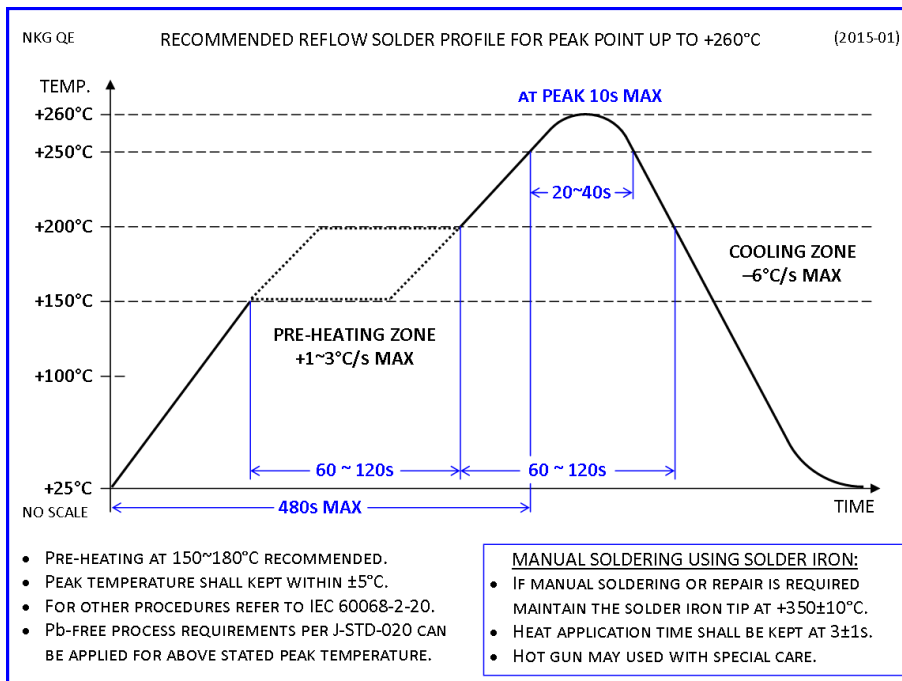
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ENVIRONMENTAL COMPLIANCE INFORMATION

- ROHS 5/6 COMPLIANT (DIRECTIVE 2011/65/EC) BY FALLING UNDER EXEMPTION 7(c)-I FOR CONTAINING LEAD (Pb) IN PIEZOELECTRIC CERAMIC (PZT) .
- COMPLIANT TO ROHS 2/3 (DIRECTIVE 2015/863) (ALSO CALLED ROHS 10).
- HALOGEN-FREE PER DEFINITION OF IEC 61249-2-21 2033.
- THE PRODUCT CONTAINS A SVHC PER REACH DUE TO THE INTENTIONAL USE OF PZT (CAS 12626-81-2), INFORMATION FOR IMPORTERS INTO THE EU CAN BE PROVIDED IN ORDER TO OBTAIN A SCIP ID AT THE ECHA PORTAL.
- 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.

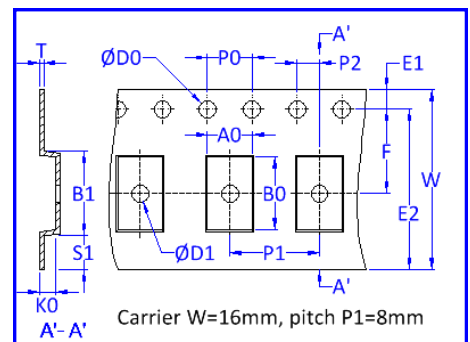


SOLDERING RECOMMENDATIONS



PACKAGING INFORMATION

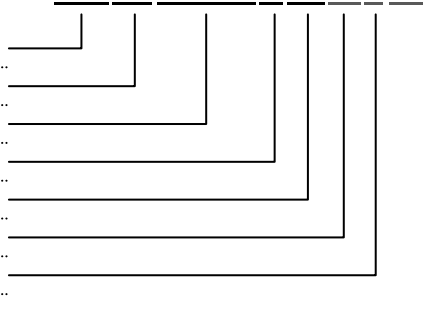
- PACKAGING IN TAPE & REEL IN COMPLIANCE TO EIA-481.
- REEL DIA A = 330MM QTY PER REEL: 4,000PCS
- REEL DIA A = 180MM QTY PER REEL: 1,000PCS
- EMBOSSED CARRIER TAPE WIDTH W = 16MM.
- CAVITY PITCH P1 = 8MM.



PART NUMBER SYNTAX

- PART NUMBER FAMILY (GROUP INDICATOR FOR CERAMIC RESONATOR WITH INBUILT LOAD CAPACITORS)
- PART NUMBER FAMILY (MODEL INDICATOR REPRESENTING PACKAGE TYPE AND SIZE)
- NOMINAL FREQUENCY (IN MHZ WITH AT LEAST TWO DIGITS AFTER DECIMAL POINT FOLLOWED BY "M")
- VIBRATION MODE CODE (G = THICKNESS SHEAR FUND, T = EXTENSION FUND, X = EXTENSION OVERT.)
- LOAD CAPACITOR VALUE (NUMERICAL VALUE OF INBUILT LOAD CAPACITORS C1 AND C2 IN pF)
- OPERATING TEMPERATURE RANGE CODE (NO CODE= -25~85°C, M= -40~85°C, Z = -40~125°C)
- FREQUENCY TOLERANCE CODE (OPTIONALLY USE FOR NONE-STANDARD TOLERANCE)
- PART NUMBER EXTENSION (ONLY FOR NONE-STANDARD OR CUSTOMIZED PARTS)

ZTTCP 3.00M G 30 M T -EXT



FOR MORE INFORMATION PLEASE CONTACT US.

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