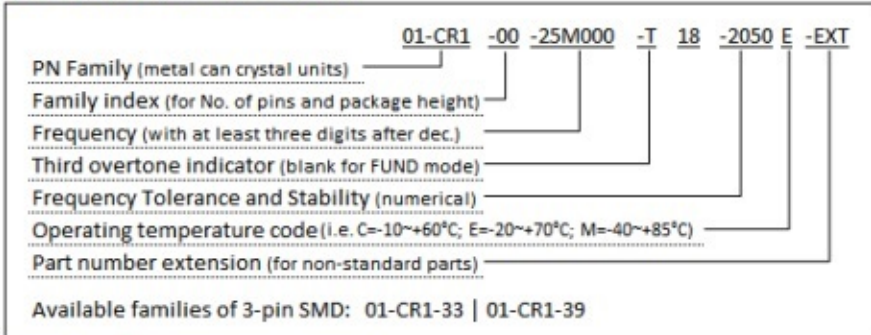


### QUARTZ CRYSTAL UNITS IN HC-49/S SMD PACKAGE (3-PINS VERSION)

#### PART NUMBER SYNTAX



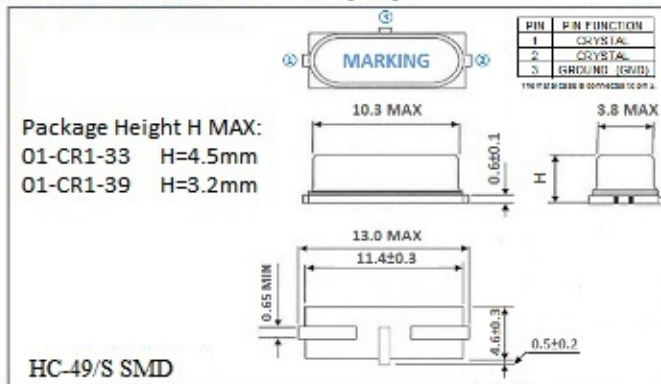
#### PRODUCT SPECIFICATIONS

Frequency Range (Fo)	3.2MHz to 90.0MHz			
Frequency Tolerance(at 25°C) ( $\Delta f/f_0$ )	$\pm 50$ ppm (typ)	$\pm 30$ ppm	$\pm 50$ ppm	$\pm 50$ ppm
Temperature Stability(REF To 25°C)	$\pm 50$ ppm (typ)	$\pm 30$ ppm	$\pm 100$ ppm	$\pm 100$ ppm
Operating Temperature Range (TOPR)	-10°C to 70°C(AT)			0°C to 60°C(BT)
Storage Temperature Range (TSTG)	-40°C to 85°C			
Shunt Capacitance (Co)	7pF Max			
Load Capacitance (CL)	10 to 32pF or Series Resonant			
Insulation Resistance	500 Mega ohms Minimum at 100Vdc			
Drive Level	0.1MW			
Aging(at 25°C)	$\pm 5$ ppm/year Max			

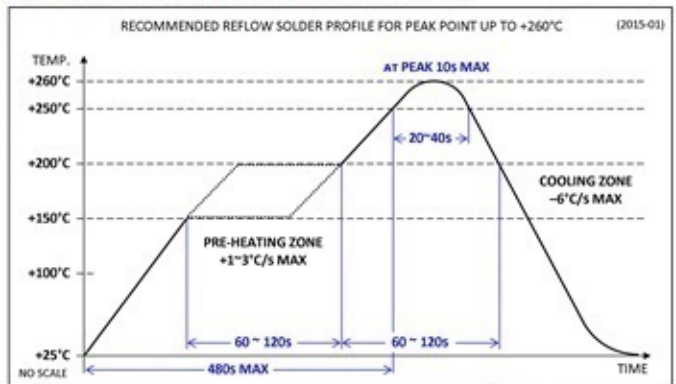
#### EQUIVALENT SERIES RESISTANCE ESR

Frequency Range	Max ESR( $\Omega$ )	Mode	Frequency Range	Max ESR( $\Omega$ )	Mode
3.200MHz to 3.500MHz	150	Fundamental/AT	8.000MHz to 8.999MHz	60	Fundamental/AT
3.500MHz to 3.999MHz	120	Fundamental/AT	9.000MHz to 9.999MHz	50	Fundamental/AT
4.000MHz to 4.499MHz	100	Fundamental/AT	10.000MHz to 12.999MHz	40	Fundamental/AT
4.500MHz to 4.999MHz	100	Fundamental/AT	13.000MHz to 19.999MHz	30	Fundamental/AT
5.000MHz to 5.999MHz	100	Fundamental/AT	20.000MHz to 30.999MHz	20	Fundamental/AT
6.000MHz to 6.999MHz	70	Fundamental/AT	30.000MHz to 90.000MHz	30	3rd overtone/AT
7.000MHz to 7.999MHz	60	Fundamental/AT	27.000MHz to 40.000MHz	30	Fundamental/BT

#### MECHANICAL DIMENSIONS [mm]



#### RECOMMENDED REFLOW CONDITIONS



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