FREQUENCY

TEMEX

QESM49H4 / H2 / H32

HC49 SMD Crystal – SMD packaged

Specification (Rev-F)

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June 30th, 2006

Electrical Characteristics

Customized specification upon request

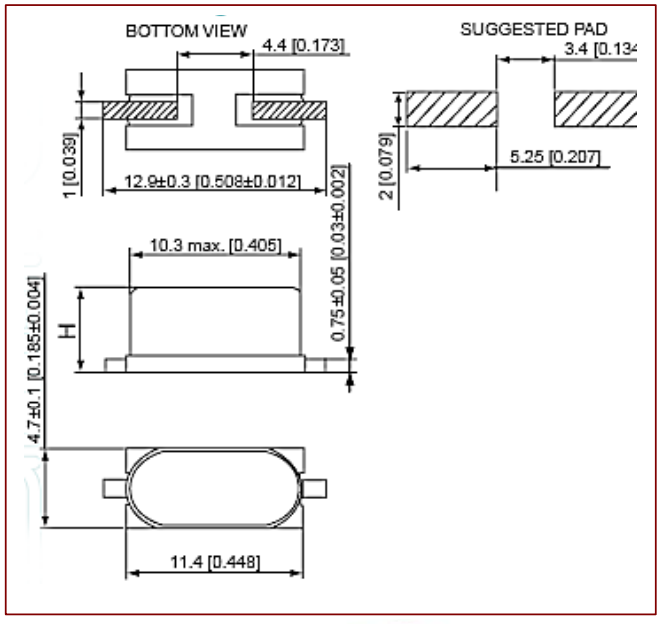
Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range (see Note 1)	MHz	3.200		75.000	
Frequency Tolerance (at 25°C)	± ppm	10	30	50	Refer to Ordering Information
Temperature Stability	± ppm	10	30	50	Refer to Ordering Information
Operating Temperature Range	°C		-20/+70	-40/+85	Refer to Ordering Information
Storage temperature range	°C	-40		+85	
Shunt capacitance C_0	pF			7.0	
Load capacitance	pF	10pF ~ 32pF or series			Refer to Ordering Information
Drive level	µW		100	500	
Ageing (First Year)	± ppm			5	Ref at 25°C
Insulator resistance	MΩ	500			At 100V_{DC}

Note 1 : 8 MHz is the minimum frequency for package QESM49H32

ESR vs. frequency range and Mode of vibration

Frequency range (MHz)	Mode of vibration	Max ESR (Ω)	Frequency range (MHz)	Mode of vibration	Max ESR (Ω)
3.200 to 4.499	Fund. / AT	150	9.000 to 9.999	Fund. / AT	60
4.500 to 5.999	Fund. / AT	120	10.000 to 12.999	Fund. / AT	50
6.000 to 6.999	Fund. / AT	100	13.000 to 30.000	Fund. / AT	40
7.000 to 7.999	Fund. / AT	90	30.000 to 75.000	3rd / AT	80
8.000 to 8.999	Fund. / AT	80	27.000 to 40.000	3rd / BT	40

Mechanical Characteristics



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Heights (mm)	
49H4	H = 5.0 max
49H2	H = 4.0 max
49H32	H = 3.2 max

Marking for SM94H4 / H2 / H32
Frequency in MHz (6 digits on the top)
ex: 10.000

Mechanical Conditions	
Vibration	10g, 10 H to 2 kHz according to standard CEI68-2-63
Shocks	100g, 6 ms according to standard CEI68-2-27

Note 1 : QESM49H serie is fully RoHS compliant.

Ordering Information

Part numbering system						
QESM49H4	1	30	HQ	50	20	25.000MHZ
Package type	Vibration mode	Frequency tolerance	Operating temperature range	Frequency stability	Load Capacitance	Nominal Frequency (MHz)
QESM49H4 : **QESM49H2 :** **QESM49H32 :** HC49 SMD packaged	1 = Fundamental 3 = 3rd Overtone	10=±10ppm 30=±30ppm 50=±30ppm	D=-40°C F= -30°C H=-20°C J=-10°C L=0°C M=+50°C N=+55°C O=+60°C Q=+70°C T=+85°C	10=±10ppm 30=±20ppm 50=±30ppm	16=16pF Please, enter the value of load capacitance	Please enter the nominal frequency

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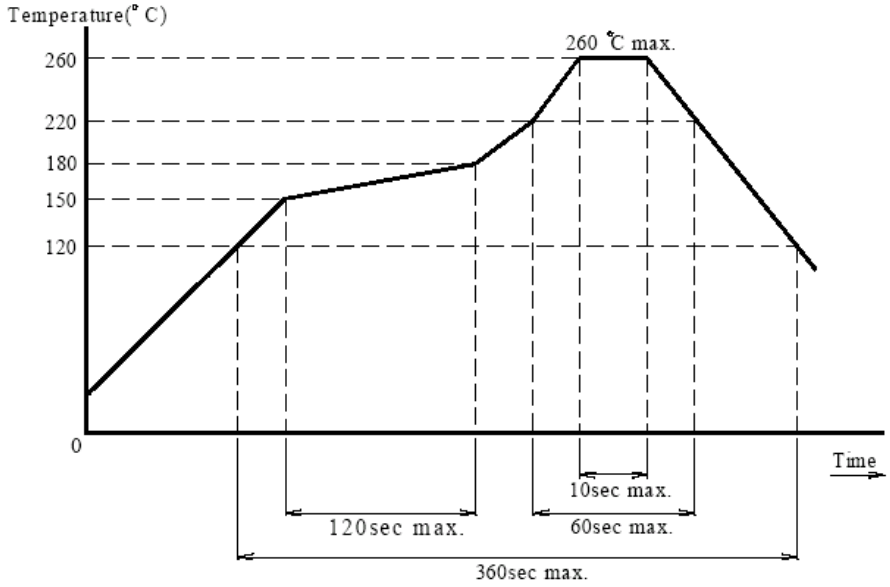
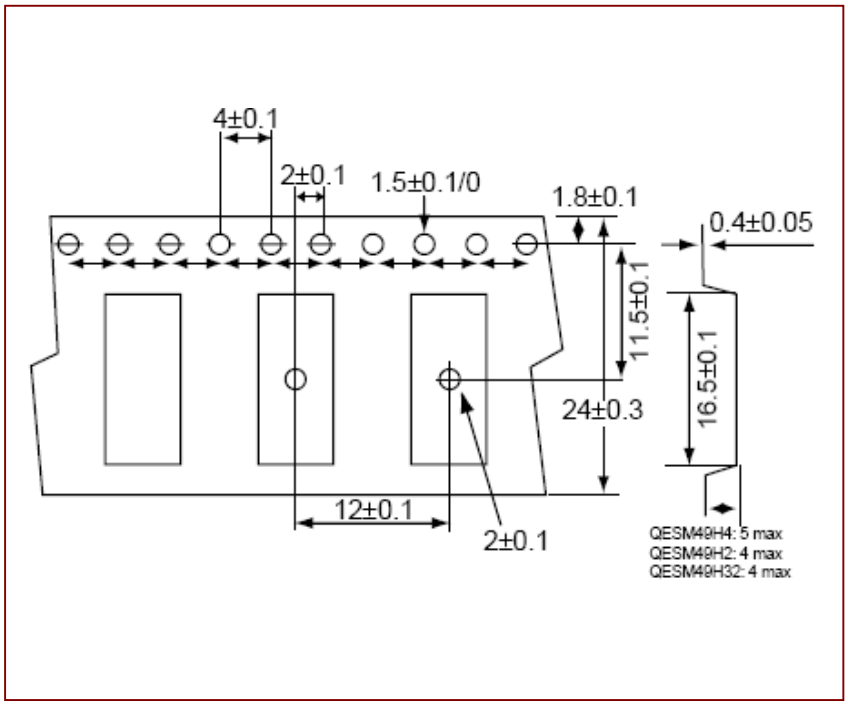
Suggested Reflow Soldering Profile



Tape Drawing



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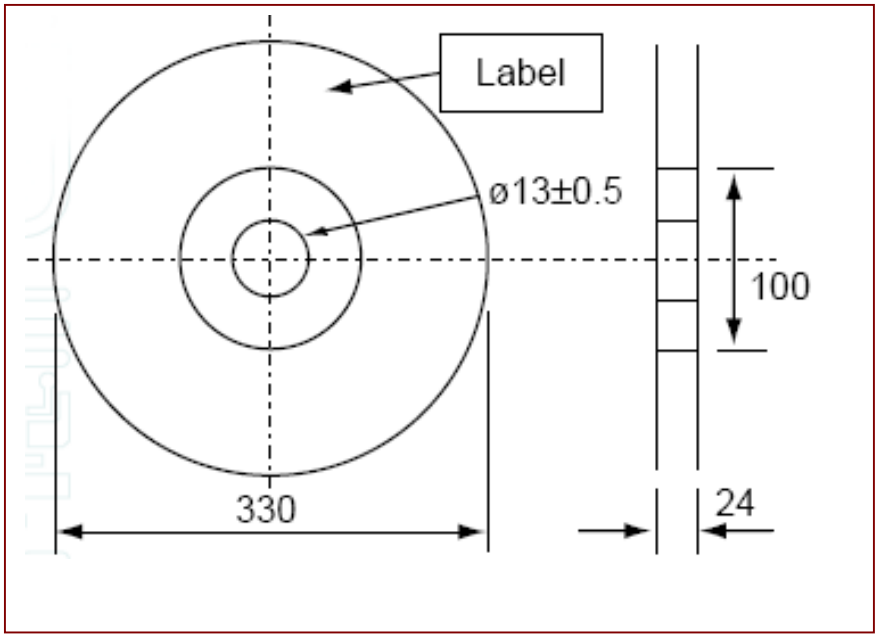
Reel Drawing



Multiple :
1000pcs per reel