



QESM07

SMD 3.0x2.5 Crystal – Ceramic SMD packaged
Specification (Rev-A)

■ Electrical Characteristics	P01
■ ESR vs. frequency range and Mode of vibration	P01
■ Mechanical Characteristics	P01
■ Ordering Information	P02
■ Suggested Reflow Soldering profile	P02
■ Tape Drawing.....	P03
■ Reel Drawing	P03

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June 26th, 2006

Electrical Characteristics

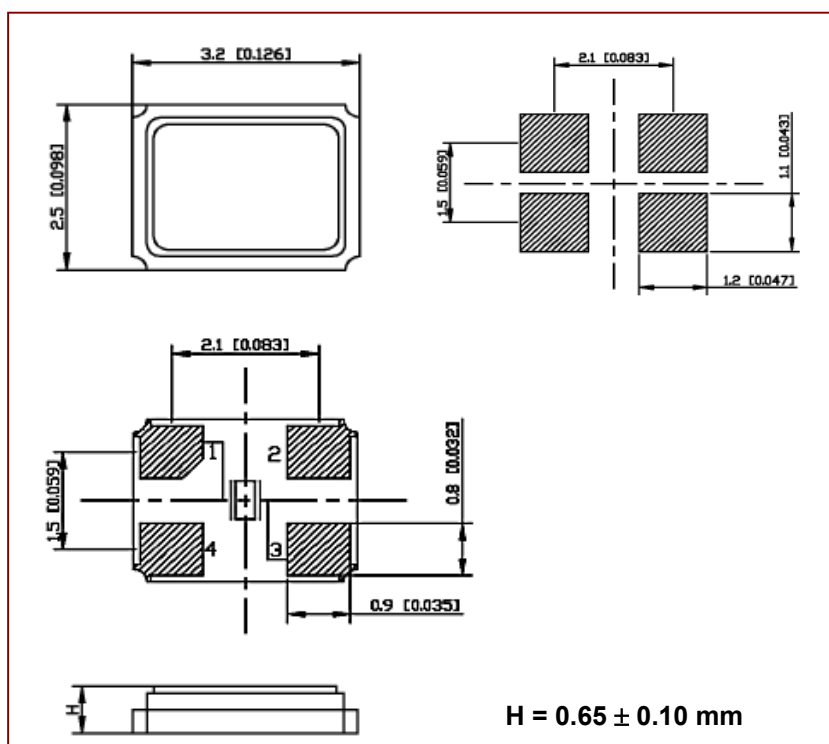
Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range	MHz	13		54	
Frequency Tolerance (at 25°C)	± ppm	10	15	30	Refer to Ordering Information
Temperature Stability	± ppm	10	15	30	Refer to Ordering Information
Operating Temperature Range	°C		-20/+70	-40/+85	Refer to Ordering Information
Storage temperature range	°C	-40		+85	
Shunt capacitance C ₀	pF			3.0	
Load capacitance	pF	8pF ~ 12pF			Refer to Ordering Information
Drive level	µW	10	100	300	
Aging (First Year)	± ppm			2	Ref at 25°C
Insulator resistance	MΩ	500			At 100V _{DC}

Customized specification upon request

ESR vs. frequency range and Mode of vibration

Frequency range (MHz)	Mode of vibration	Max ESR (Ω)
13.000 to 19.999	Fundamental (AT-cut)	80
20.000 to 25.999	Fundamental (AT-cut)	70
26.000 to 54.000	Fundamental (AT-cut)	50

Mechanical Characteristics



Marking for QESM06

Line 1	Temex code (3 digits)
Line 2	T+date code (2digits)

Mechanical conditions

Vibration	10g, 10Hz to 2KHz according to standard CEI 68-2-63
Shocks	100g, 6ms according to standard CEI 68-2-27

Note 1 : Pin 2 and Pin 4 are connected through cover. In case connected to GND, frequency might be drifted.

Note 2 : QESM07 is fully RoHS compliant.

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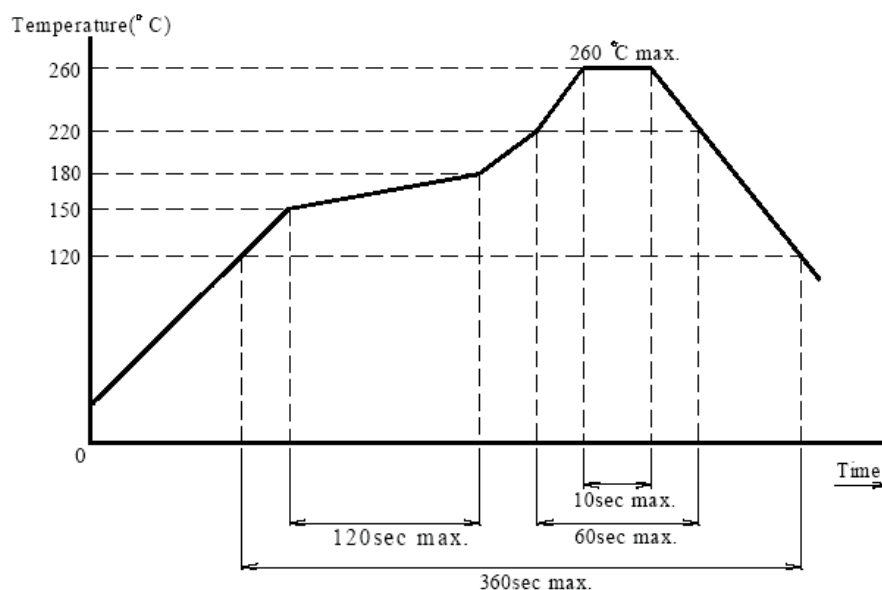
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Ordering Information

Part numbering system						
QESM07	1	10	HQ	10	10	14.7456MHZ
↓	↓	↓	↓	↓	↓	↓
Package type	Vibration mode	Frequency tolerance	Operating temperature range	Frequency stability	Load Capacitance	Nominal Frequency (MHz)
SMD Package QESM07 : SMD ceramic 3.2 x 2.5	1=Fundamental	10=±10ppm 20=±20ppm 30=±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 20=±20ppm 30=±30ppm	10=10pF Please, enter the value of load capacitance	Please enter the nominal frequency

Suggested Reflow Soldering Profile

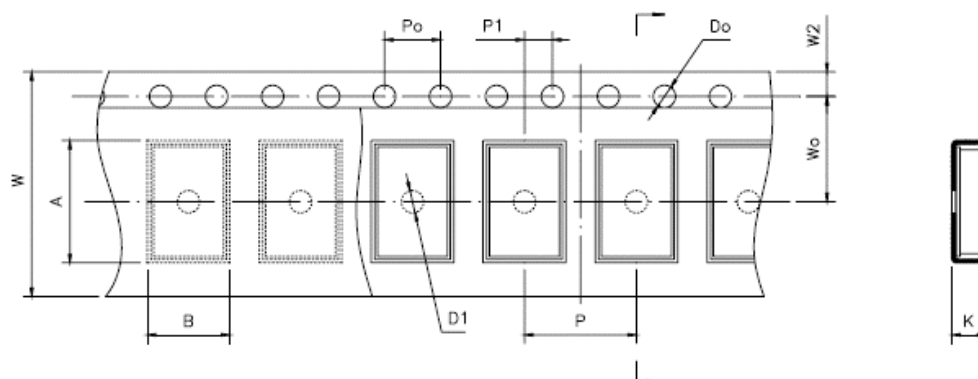


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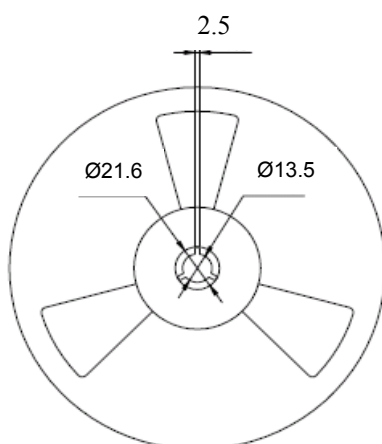
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■ Tape Drawing



	Code	Dimension	Tolerance
Pitch of components	P	4.0	± 0.1
Pitch of sprocket hole	P0	4.0	± 0.1
Length from hole center to component center	P1	2.0	± 0.1
Width of carrier tape	W	8.0	± 0.3
Width of adhesive tape	W0	3.5	± 0.1
Height of component hole	A	3.5	± 0.1
Width of component hole	B	2.8	± 0.1
Gap of hold down tape and carrier tape	W2	0.5	± 0.1
Diameter of sprocket hole	D0	Ø 1.5	± 0.05
Diameter of feed hole	D1	Ø 1.5	± 0.25
Total of tape thickness	K	1.0	± 0.1

■ Reel Drawing



Multiple :
2000pcs per reel

