

QESM10

SMD 1.6x1.2 Crystal – Ceramic SMD packaged
Specification (Rev-A)

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Sept 24th, 2014

Electrical Characteristics

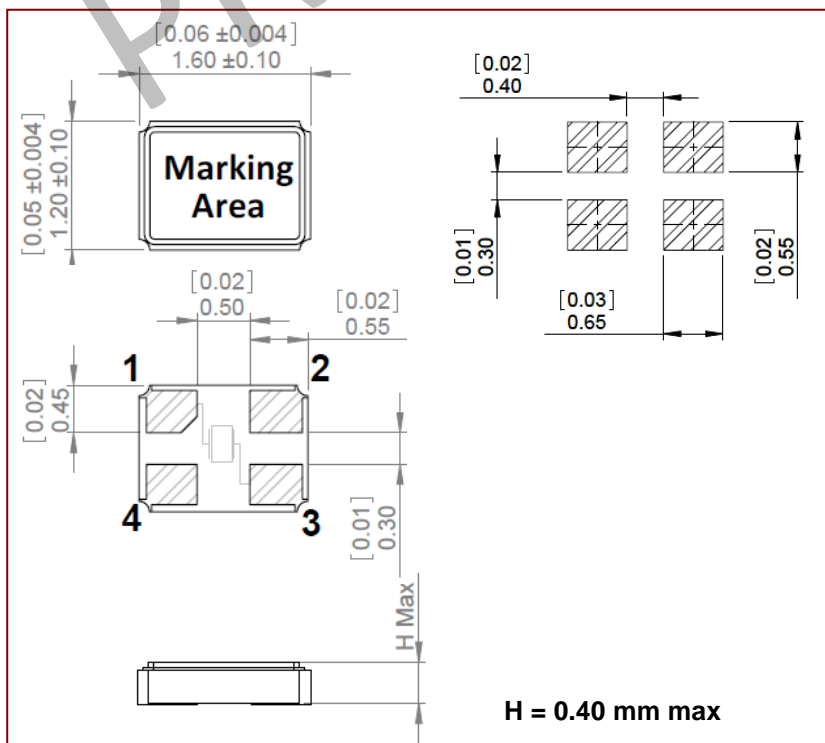
Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range	MHz	26		52	
Frequency Tolerance (at 25°C)	± ppm	10	15	30	Refer to Ordering Information
Temperature Stability	± ppm	10	15	30	Refer to Ordering Information
Operating Temperature Range	°C		-20/+70	-40/+85	Refer to Ordering Information
Storage temperature range	°C	-55		+125	
Shunt capacitance C ₀	pF			3.0	
Load capacitance	pF	5pF ~ 32pF			Refer to Ordering Information
Drive level	µW			30	
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)
26.000 to 29.999	Fundamental (AT-cut)	150
30.000 to 52.000	Fundamental (AT-cut)	100

Mechanical Characteristics



Marking for QESM10

Line 1	Rakon code (6 digits)
Line 2	T+date code (YWW)

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: QESM10 is compliant with RoHS 2 Directive (2011/65/EU).



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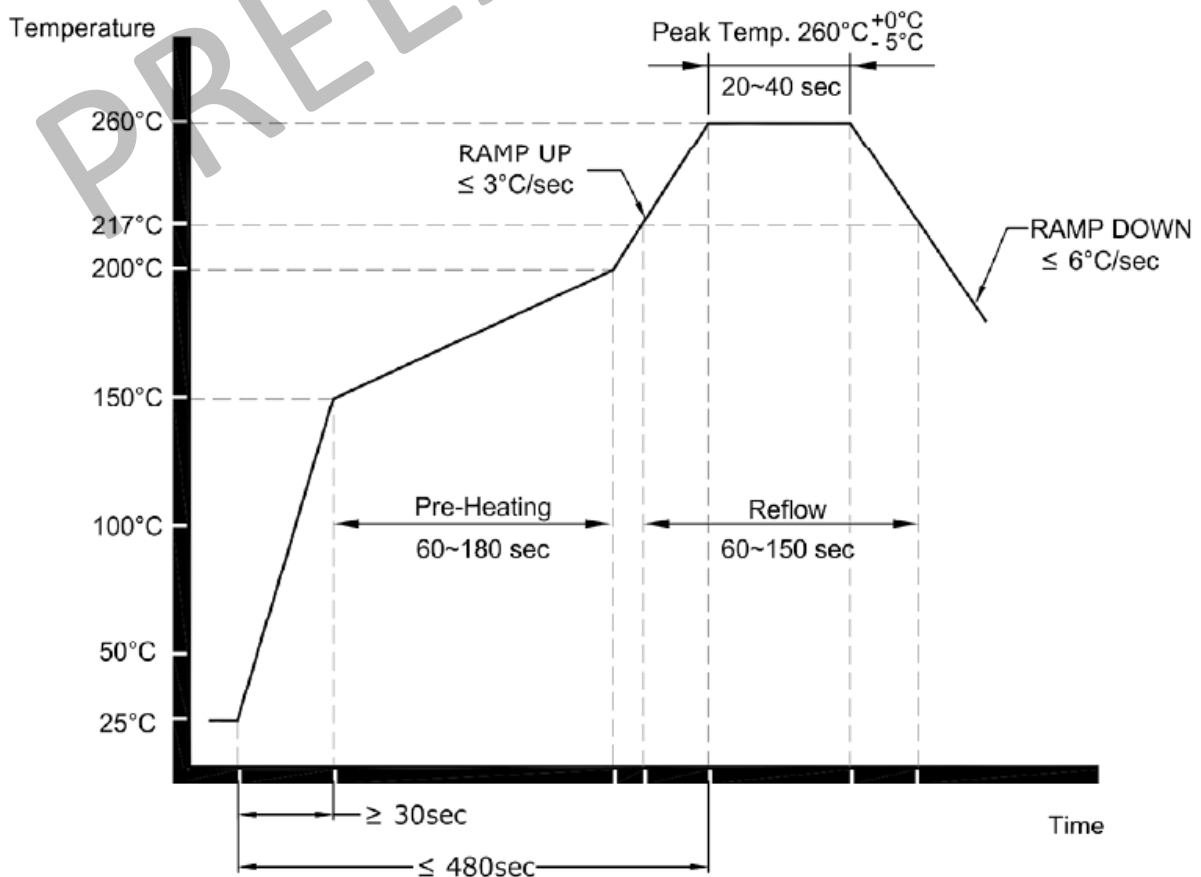
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Ordering Information

Part numbering system						
QESM10	1	15	HQ	15	10	26.000MHZ
Package type	Vibration mode	Frequency tolerance	Operating temperature range	Frequency stability	Load Capacitance	Nominal Frequency (MHz)
SMD Package QESM10 : SMD ceramic 1.6 x 1.2	1=Fundamental	10=±10ppm 15=±15ppm 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 15=±15ppm 20=±20ppm 30=±30ppm	10=10pF Please, enter the value of load capacitance	Please enter the nominal frequency

Suggested Reflow Soldering Profile



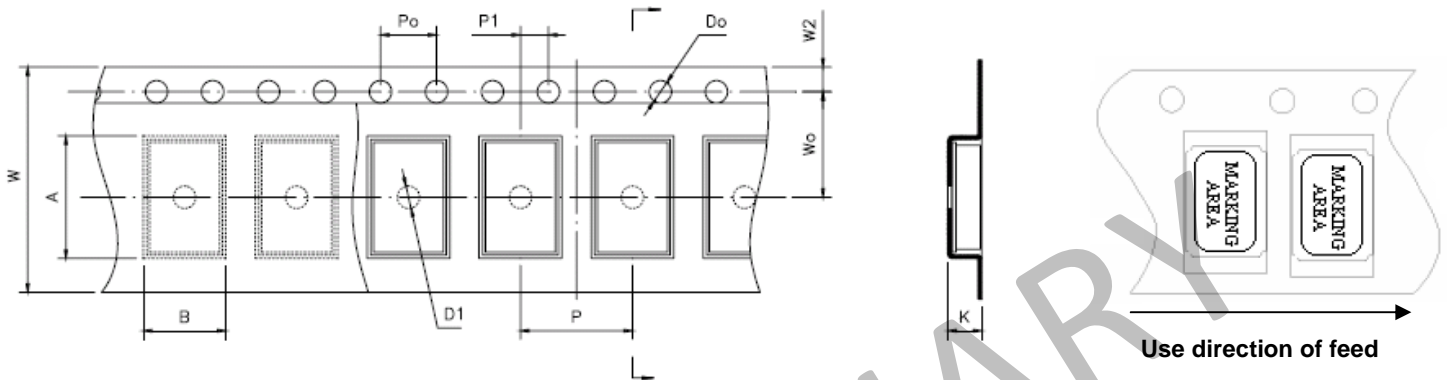
Referred to JEDEC J-STD-020C.

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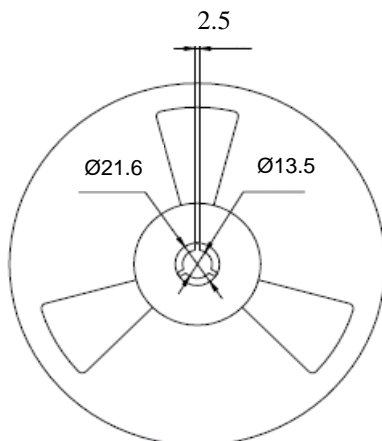
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▣ Tape Drawing

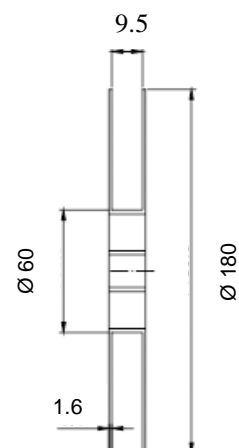


Item	Code	Dimension	Tolerance
Pitch of components	P	4.0	± 0.1
Pitch of sprocket hole	P ₀	4.0	± 0.1
Length from hole center to component center	P ₁	2.0	± 0.1
Width of carrier tape	W	8.0	± 0.2
Width of adhesive tape	W ₀	3.5	± 0.05
Height of component hole	A	1.8	± 0.1
Width of component hole	B	1.45	± 0.1
Gap of hold down tape and carrier tape	W ₂	1.75	± 0.1
Diameter of sprocket hole	D ₀	∅ 1.5	± 0.05
Diameter of feed hole	D ₁	∅ 1.0	± 0.05
Total of tape thickness	K	0.6	± 0.1

▣ Reel Drawing



Multiple :
3000pcs per reel



(unit : mm)