



QEN62

Plastic J LEAD SMD XO – Communications Equipment Application
Specification (Rev-G)

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Electrical Characteristics

Electrical Parameters	Unit	Minimum	Typical	Maximum	Test conditions
Frequency range	MHz	1		125	
Output logic	HCMOS / TTL Output				
Operating temperature range (see table 1)	°C		-10 to +70	-40 to +85	Refer to Ordering Information
Storage temperature range	°C	-55		+125	
Power supply voltage (Vcc)	V	5.0V±10% / 3.3V±10%			Refer to Ordering Information
Frequency Stability (see table 1)	± ppm		50	100	Refer to Ordering Information
Aging (First Year)	± ppm			3	Ref at 25°C
Input current (see table 2)	mA				
Output	low level V _{OL}			10% V _{CC}	
	high level V _{OH}		90% V _{CC}		
Output load	HCMOS load	pF	15	30	Refer to Ordering Information
	TTL load	LS-TTL	1	10	
Duty cycle	%		40/60		
Rise & Fall time (see table 3)	ns			7	From 10% V _{CC} to 90% V _{CC}
Start-up time	ms			5	
RMS Phase Jitter	ps			1	Typical integrated 12kHz to 20MHz

Note 1: Include 25°C tolerance, operating temperature range, input voltage change (±5%), load change (±10%), first year aging, shock and vibration.

	± 50ppm	± 100ppm
-10 to +70°C	B	A
- 40 to +85°C	F	D

Frequency range (MHz)	Vcc=5V & 3.3V
1.000 to 30.000	7 ns max
30.001 to 70.00	5 ns max
70.001 to 125.0	4 ns max

Frequency range (MHz)	Frequency (MHz)	Vcc=5V CI=15 pF	Vcc=3.3V CI=15pF	MODE
1.000 to 23.99	1	3 mA	2 mA	1/16
	8	5 mA	3 mA	1/2
	20	7 mA	5 mA	FUND.
24.00 to 49.99	32	10 mA	7 mA	FUND.
	48	20 mA	15 mA	3RD
50.00 to 79.99	51.84	27 mA	18 mA	3RD
	60	27 mA	18 mA	3RD
	66	27 mA	18 mA	3RD
80.00 to 125.0	100	30 mA	20 mA	3RD

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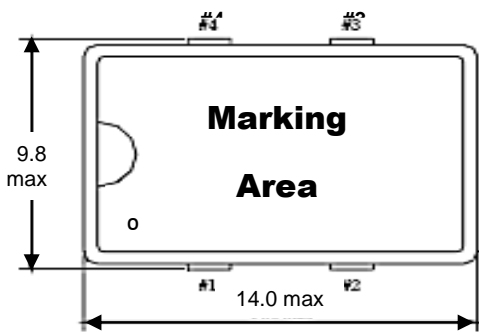
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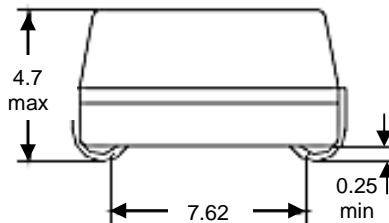
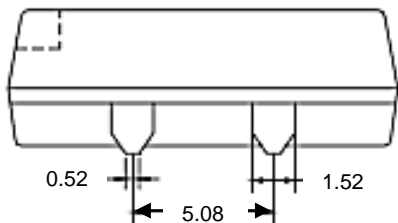
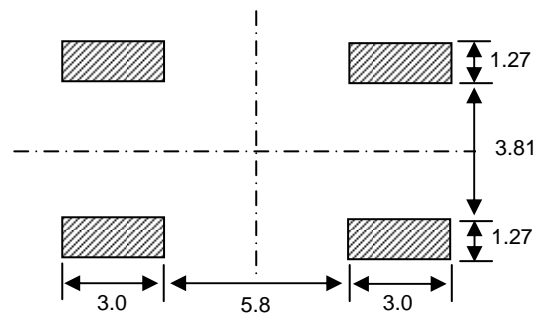
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▣ Mechanical Characteristics

BOTTOM VIEW



SUGGESTED PAD



Pin connections	
#1	Tri state
#2	Ground
#3	Output
#4	+Vcc

Tri state function	
Pin #1	Output (Pin #3)
Open	Active
"1"	Active
"0"	High Z

Marking	
Line 1	QEN62 + stability/supply voltage/output code
Line 2	Frequency in MHz (6 digits)
Line 3	Date code (YYWW)+Manufacturing code

Example for QEN62AAB / 3.6864MHz

- ⇒ Line 1 : QEN62AAB
- ⇒ Line 2 : 3.6864
- ⇒ Line 3 : 1634-N

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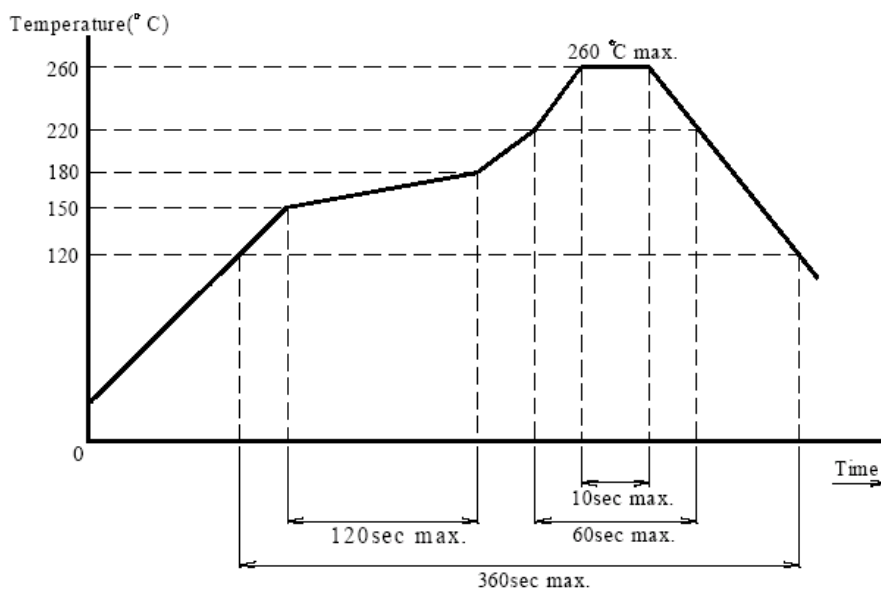
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Ordering Information

Part numbering system				
QEN62	A	A	B	3.6864MHZ
↓	↓	↓	↓	↓
Package type	Temperature Stability	Supply Voltage	Output	Nominal Frequency (MHz)
SMD Package QEN62 : Plastic J Lead SMD	A : ± 100ppm vs -10 to +70°C B : ± 50ppm vs -10 to +70°C D : ± 100ppm vs -40 to +85°C F : ± 50ppm vs -40 to +85°C	A : + 5.0V D : +3.3V	A : HCMOS 15pF B : HCMOS 30pF	Please enter the nominal frequency

Remark: Load 30pF is not available with all combinations. Feel free to contact our sales representatives.

Suggested Reflow Soldering Profile



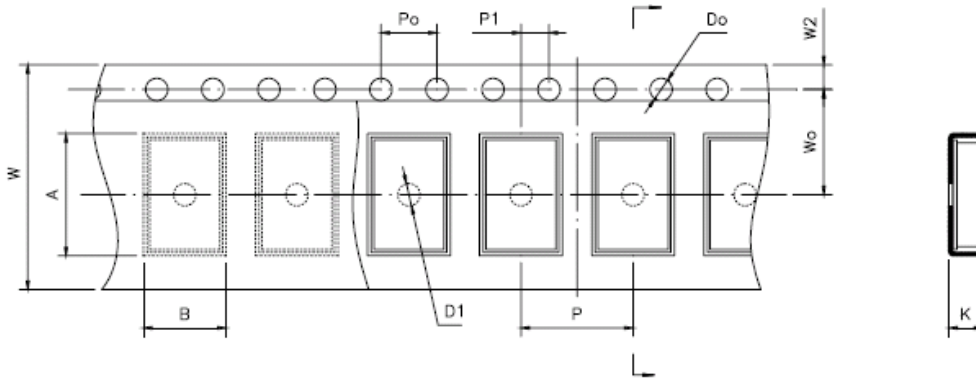
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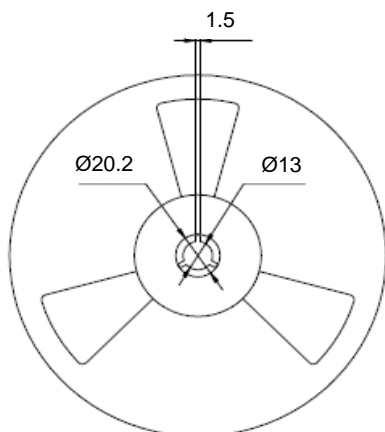
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▣ Tape Drawing



Item	Code	Dimension	Tolerance
Pitch of components	P	12	± 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	24.0	± 0.3
Width of adhesive tape	W ₀	11.5	± 0.1
Height of component hole	A	14.65	± 0.1
Width of component hole	B	9.60	± 0.1
Gap of hold down tape and carrier tape	W ₂	1.75	± 0.1
Diameter of sprocket hole	D ₀	∅ 1.55	± 0.05
Diameter of feed hole	D ₁	∅ 1.55	± 0.25
Total of tape thickness	K	5.60	± 0.1

▣ Reel Drawing



Multiple : 1Kpcs per Reel

Unit : mm

