

QEN4

12.6 x 12.6 mm, 8 pin DIL package



Frequency and Electrical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Test condition / Description																	
Nominal frequency (Fn)	0.5		150	MHz																		
Operating temperature range		0 to +70	-40 to +85	°C	See 'Order Part Example'																	
Storage temperature range	-55		+125	°C																		
Frequency stability over temperature ¹			±15 to ±100	ppm	See 'Order Part Example'																	
Long-term stability (Ageing)			±5	ppm	Frequency drift over 1 year at 25°C																	
Power supply voltage(V _{CC})																						
3.3V (BH option)	3.135	3.3	3.465	V _{DC}	See 'Order Part Example'																	
5.0V (H option)	4.750	5.0	5.250																			
Duty cycle	40	50	60	%																		
Rise & fall time			10	ns	From 10% V _{CC} to 90% V _{CC}																	
Start-up time			10	ms																		
Output load																						
HCMOS		15		pF	With 15pF HCMOS load																	
TTL load		5		LS-TTL																		
Maximum output load	<table border="1"> <thead> <tr> <th>Frequency</th> <th>V_{CC} = 5V</th> <th>V_{CC} = 3.3V</th> </tr> </thead> <tbody> <tr> <td>Up to 50.000MHz</td> <td>50 pF</td> <td>30 pF</td> </tr> <tr> <td>Up to 70.000MHz</td> <td>30 pF</td> <td>20 pF</td> </tr> <tr> <td>Up to 150.00MHz</td> <td>15 pF</td> <td>15 pF</td> </tr> </tbody> </table>					Frequency	V _{CC} = 5V	V _{CC} = 3.3V	Up to 50.000MHz	50 pF	30 pF	Up to 70.000MHz	30 pF	20 pF	Up to 150.00MHz	15 pF	15 pF					
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¹ Include 25°C tolerance, operating temperature range, input voltage change (V_{CC} ±5%), load change (15pF ±10%), first year ageing, shock and vibration.

Order Part Example – QEN4HJ LQ25 / 10.000MHZ

Parameter	Product family and package	Supply Voltage (V _{CC})	Option	Operating temperature range	Frequency stability** (FvT)	Nominal Frequency (Fn. MHz)
Code	QEN4	H	J	LQ	25	10.000MHz
Decode	QEN = XO 4 = 8 pin, Half size DIL	H = 5.0V BH = 3.3V	J = Tri-state R = Duty cycle 45/55%	LQ = 0 to 70°C JQ = -10 to 70°C HQ = -20 to 70°C DT = -40 to 85°C	15 = ±15ppm 25 = ±25ppm 50 = ±50ppm 100 = ±100ppm	Please enter Fn

** Maximum deviation:

Operating temperature range	±15ppm	±25ppm	±50ppm	±100ppm
0 to 70°C	Yes	Yes	Yes	Yes
-10 to 70°C	–	Yes	Yes	Yes
-20 to 70°C	–	Yes	Yes	Yes
-400 to 85°C	–	Yes	Yes	Yes

Model Outline, Recommended Pad Layout, Marking and Packaging

TOP VIEW

FRONT VIEW

BOTTOM VIEW

Marking	Note
Line 1 QEN4HJ LQ25	Product code: See order example
Line 2 10.000	Frequency in MHz (6 digits)
Line 3 2249-N	Year code (YY): 22 = 2022, Week code (WW): 49 = Week 49 of the year, N = Manufacturing code

Pin	Connections
1	NC, or Tri-state (Open = Active, 1 = Active, 0 = High)
2	GND
3	Output
4	V _{CC}

NOTE:

- Packaging: ESD carton box
- Dimension unit is in millimetre.