IMPACT, LLC

Ceramic Surface Mount

MO40R

5.0 x 3.2mm, 2.5V or 3.3V, Low Jitter LVDS Oscillator

Lead Free

EU RoHS EU RoHS Leaf Compliant

Reach Compliant

China RoHS Compliant

Conflict Minerals Free

Specifications

		MO40R	
Part Number (See Voltage Selection Page 2)		**V2** 2.5Vdc	**V4** 3.3Vdc
Frequency		80.000MHz ~ 320.000MHz	
Device Type		3rd Overtone	
Frequency Accuracy		±50ppm	
Temp. Range	**Operating (T_{OPR})**	-40°C ~ +85°C	
	Storage (T_{STG})	-55°C ~ +125°C	
Start Up Time		10mS Max	
Integrated Jitter RMS 12KHz to 20MHz Band 10KHz to 1MHz Band		0.3pS Typ 2.8 pS Max	

Electrical Specifications

Logic Family		LVDS	
Power Supply	**Voltage (V_{CC})**	2.5Vdc ±5%	3.3Vdc ±5%
	Current (I_{OP})	66mA Max	
	Standby (I_{CC})	30uA Max	
Output	**Load**	100 Ω	
	High (V_{OH})	1.43V (Typ)	
	Low (V_{OL})	1.10V (Typ)	
Symmetry/Duty		45/55% at 50% of waveform	
Rise (T_R) & Fall (T_F) Time		300pS Typ / 700pS Max	

Enable / Disable

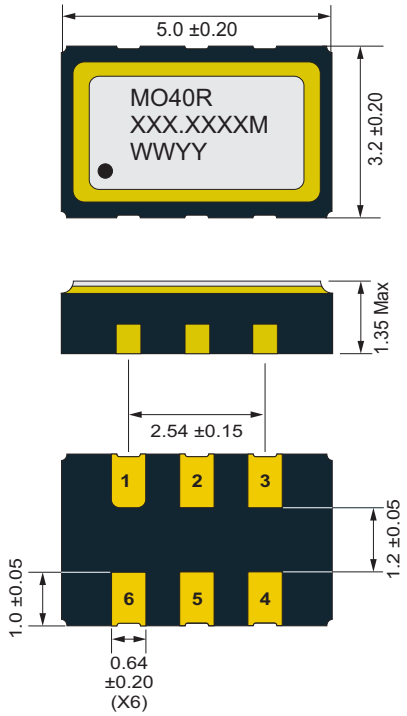
Default Pin 1- (Option Pin 2)	Output Pins 4 & 5 Default	U2 Option
≥2.4Vdc (Enable Pin)	Enabled	Disabled
N/C or Open (Enable Pin)	Enabled	
≤0.8Vdd (Enable Pin)	Disabled	Enabled
Enable Time	2mS Max	
Disable Time	200nS Max	

When disabled, output is inactive (Hi Impedance)

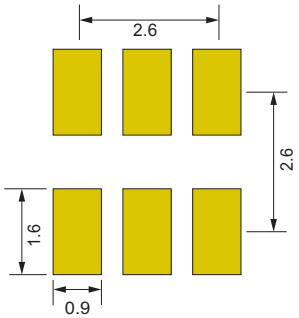
Absolute Maximum Ratings

Maximum Storage Temp	-55°C to +85°C
Voltage (V_{DD})	4.0 VDC
Input Voltage	-0.5Vdc ~ Vdd+0.5Vdc

Dimensions (mm)



Land Pattern (mm)



Connections

Option See Page 2	P1	P2
Pin 1	Enable/Disable	N/C
Pin 2	N/C	Enable/Disable
Pin 3	Case Grnd	
Pin 4	Output	
Pin 5	Output N	
Pin 6	Vdd	

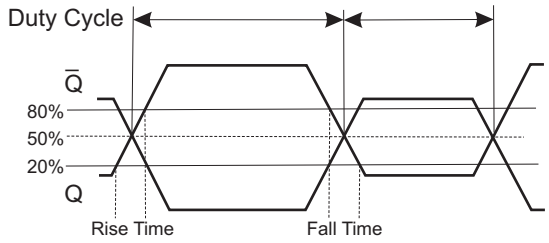
Enable is wired internally to Pin 1 or Pin 2 (Not Both)
Default is Pin1; use P2 Options to specify Enable on P2

ISO 9001:2015 Certified

7121 Magnolia Avenue, Riverside, CA 92504 - Tel: (951) 441-3322

www.impactllc.com

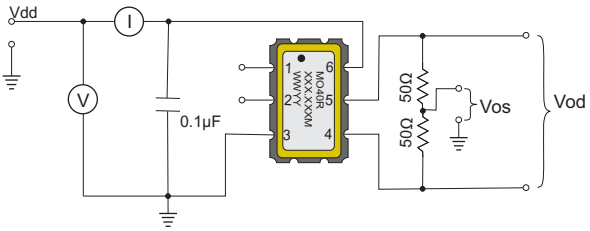
LVDS Waveform

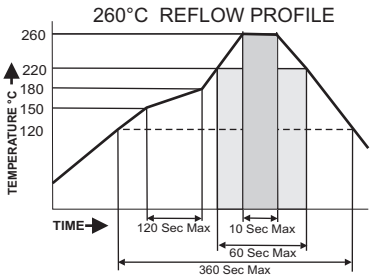


Environmental and Mechanical

Temperature	10 Cycles of -30ºC (30Mins), Normal (1Hr), 85ºC (30Mins), Normal (1Hr)
Shock	Accelerated at 1000G for 1mS in each perpendicular axis.
Vibration	4 Cycles of 20G acceleration at 20 - 2,000Hz within 4 Minutes in each perpendicular axis.
Solder	Peak Temperature of 260ºC Max for 10 Seconds with preheat of 160ºC for 90±10% for 10 Seconds for a Maximum of 2 Cycles.

LVDS Test Circuit





Part Number

MO40R- XXX.XXXM- VX SX RX PX UX QX- T

Stability	
S2	±25ppm
S3	±10ppm
SC	Cust. Stability

Voltage	
V2	2.5 Volt
V4	3.3 Volt

En/Dis Pin	
P2	En/Dis on Pin 2

OP Temp	
R6	-40 ~ +85°C

Duty Cycle	
Q2	47.5/52.5 Duty

En/Dis	
U2	En/Dis - En Lo

- Tape & Reel
- Duty Cycle Option **Default:** 45/55
- Enable Option **Default:** Enabled Hi
- Enable Pin Assignment: **Default:** Pin 1
- Temperature Range Options **Default:** -40ºC ~ +85ºC
- Stability Options **Default:** ±50ppm
- Voltage Selection: **Default:** 3.3Vdc
- Frequency: 80.000MHz ~ 320.000MHz
- Standard RoHS Compliant 5.0 x 3.2mm SMD Oscillator

A) Options not specified default to the values indicated on the data sheet.
B) V2 or V4 must be specified for the device voltage

Example: **MO40R-100.000M-V4-T** is a MO40R Package, 100.000MHz, 3.3Vdc, Operating at ±50ppm stability from -40°C ~ +85°C, Delivered on Tape & Reel

Example: **MO40R-270.000M-V2S2R6-T** is a MO40R Package, 270.000MHz, 2.5Vdc, operating at ±25ppm stability from -40ºC ~ +85ºC, Delivered on Tape & Reel

Tape & Reel