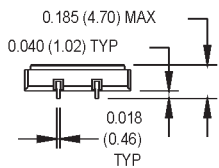
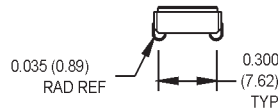
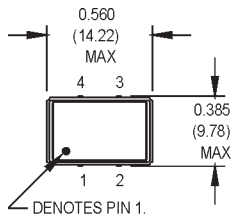
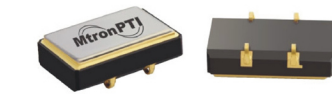


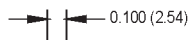
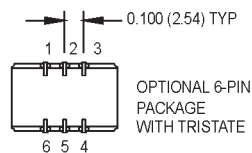
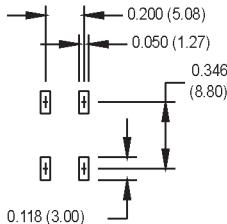
M5R Series

9x14 mm, 3.3 Volt, LVPECL/LVDS, Clock Oscillator



All dimensions
in inches (mm).

SUGGESTED SOLDER PAD LAYOUT



Pin Connections

FUNCTION	4 Pin	6 Pin
N/C or Output $\bar{Q}$	1	1
Enable		2
Ground/Cover	2	3
Output Q	3	4
N/C		5
+Vcc	4	6

Ordering Information

	M5R	1	8	Z	Q	J	-R	00.0000 MHz
Product Series								
Temperature Range								
1: 0°C to +70°C			2: -40°C to +85°C					
6: -20°C to +70°C			7: -0°C to +85°C					
8: 0°C to +50°C								
Stability								
3: ±100 ppm		4: ±50 ppm		5: ±35 ppm				
6: ±25 ppm		8: ±20 ppm						
Output Type								
R: Complementary Enable				T: Single Enable				
Z: Complementary w/o Enable				X: Single w/o Enable				
Symmetry/Output Logic Type								
L: 45/55% LVDS			P: 45/55% PECL					
H: 40/60% LVDS			Q: 40/60% PECL					
Package/Lead Configurations								
J: J-lead								
RoHS Compliance								
Blank: non-RoHS compliant part								
-R: RoHS compliant part								
Frequency (customer specified)								

1. Calibration, deviation over temperature, shock, vibration, and aging.
2. PECL load - see load circuit diagram #5. LVDS load - see load circuit diagram #9. M2011Sxxx - Contact factory for datasheet.

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Electrical Specifications	Frequency Range	F	0.75	800		MHz	
	Operating Temperature	T _A	(See ordering information)				
	Storage Temperature	T _S	-55		+125	°C	
	Frequency Stability	ΔF/F	(See ordering information)				See Note 1
	Aging						
	1st Year			±2		ppm	
	Thereafter (per year)			±1		ppm	
	Input Voltage	V _{CC}	3.135	3.3	3.465	V	
	PECL Input Current	I _{CC}			60	mA	0.75 to 24 MHz
					95	mA	24 to 96 MHz
					105	mA	96 to 800 MHz
	LVDS Input Current	I _{CC}			30	mA	0.75 to 24 MHz
					60	mA	24 to 800 MHz
	Output Type						PECL/LVDS
	Load		50 Ohms to V _{CC} - 2 VCD 100 Ohm differential load				See Note 2 PECL Waveform LVDS Waveform
	Symmetry (Duty Cycle)		(See ordering information)				@ V _{CC} -1.3 VDC (LVPECL) @ 50% of waveform (LVDS)
	Output Skew				200	ps	PECL
	Differential Voltage		250	350	450	mV	LVDS
Environmental	Logic "1" Level	V _{OH}	V _{CC} -1.02			V	PECL
	Logic "0" Level	V _{OL}			V _{CC} -1.63	V	PECL
	Rise/Fall Time	Tr/Tf		0.35 0.50	0.55 1.0	ns	@ 20/80% LVPECL @ 20/80% LVDS
	Enable Function		80% V _{CC} min or N/C: output active 20% V _{CC} max: output disables to high-Z				"R" & "T" output types
	Start up Time				10	ms	
	Phase Jitter	φ _J					
	>1=20 MHz			3	5	ps RMS	Integrated 12 kHz – 20 MHz
	Mechanical Shock	MIL-STD-202, Method 213, C (100 g's)					
	Vibration	MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)					
	Thermal Cycle	MIL-STD-883, Method 1010, B (-55°C to +125°C, 15 min dwell, 10 cycles)					
	Hermeticity	MIL-STD-202, Method 112					
	Solderability	Per EIAJ-STD-002					
	Max Soldering Conditions	See solder profile, Figure 1					

1. Calibration, deviation over temperature, shock, vibration and aging.
2. PECL load - see Load Circuit Diagram #5. LVDS load - see load circuit diagram #9.

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

Please see www.mtronpti.com for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.

MtronPTI Lead Free Solder Profile

