

M5R Series SMT LVPECL/LVDS Oscillators

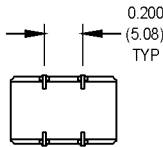
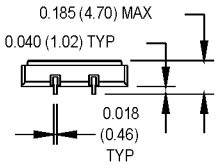
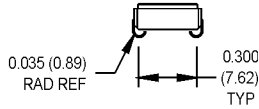
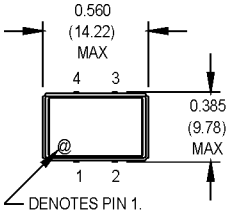


Pin Connections

FUNCTION	4 Pin	6 Pin
N/C or Output Q	1	1
Tri-state		2
Ground/Cover	2	3
Output Q	3	4
N/C		5
+Vcc	4	6

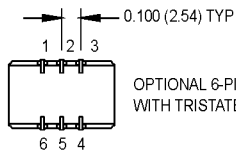
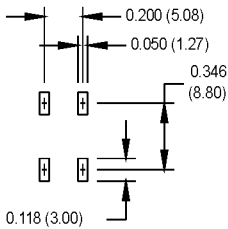
Ordering Information

Product Series	Temperature Range	Stability	Output Type	Symmetry/Output Logic Type	Package/Lead Configurations	Frequency (customer specified)
M5R	1: 0°C to +70°C 2: -40°C to +85°C 6: -20°C to +70°C 8: 0°C to +50°C	3: ±100 ppm 4: ±50 ppm 6: ±25 ppm 8: ±20 ppm	M: Complementary Tri-state C: Complementary Non-Tri-state	L: 45/55% LVDS P: 45/55% PECL	J: J-lead	00.0000 MHz

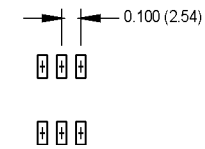


All dimensions in inches (mm).

SUGGESTED SOLDER PAD LAYOUT



OPTIONAL 6-PIN PACKAGE WITH TRISTATE



PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
Frequency Range	F	0.75		650	MHz		
Frequency Stability	$\Delta F/F$	(See Ordering Information)					See Note 1
Operating Temperature	Ts	-40		+85	°C	See ordering information	
Storage Temperature	Ta	-55		+125	°C		
Input Voltage	Vcc	3.15	3.3	3.45	V		
PECL Input Current	Icc						
0.75 MHz to 24 Mhz				25	mA		
24 MHz to 96 MHz				65	mA		
96 MHz to 650 MHz				100	mA		
LVDS Input Current	Icc						
0.75 MHz to 24 MHz				25	mA		
24 MHz to 96 MHz				45	mA		
96 MHz to 650 MHz				80	mA		
Symmetry (Duty Cycle)		45	50	55	%	At Vcc -1.3 VDC (PECL) At 1.25 VDC (LVDS)	
Load		50 Ohms to Vcc -2 VDC 50 Ohm differential load				PECL waveform LVDS waveform	
Rise/Fall Time	Tr/Tf						
PECL			0.6	2	ns	At 20/80%	
LVDS			0.5	2	ns	At 20/80%	
Logic "1" Level	Voh	Vcc -1.02			V	PECL	
		1.375			V	LVDS	
Logic "0" Level	Vol			Vcc -1.63	V	PECL	
				1.125	V	LVDS	
Phase Jitter	ϕJ			1	ps	fj > 1 kHz	
Differential Voltage	Vo	250	340	450	mV	LVDS	
Tri-state Output "On"	OE	2.8			V	Pin 2 voltage	
Tri-state Output "Off"	OE			0.6	V	Pin 2 voltage	
Phase Noise PECL/LVDS						Offset from carrier	
@ 19.440 Mhz	-65	-95	-123	-140	-147	dBc/Hz	
@ 106.25 Mhz	-60	-90	-118	-134	-134	dBc/Hz	
@ 155.520 Mhz	-58	-88	-112	-132	-132	dBc/Hz	
@ 622.080 Mhz	-50	-80	-109	-130	-132	dBc/Hz	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C						
Vibration	Per MIL-STD-202, Method 201 & 204						
Reflow Solder Conditions	220°C for 10 s max.						
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm.cc/s of helium)						
Solderability	Per EIAJ-STD-002						

1. Calibration, deviation over temperature, shock, vibration, and aging.

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