

SMD LVPECL Differential

7.0 x 5.0 x 1.8 mm

0.6 pS phase jitter (typical)

10 ~ 1450 MHz



RoHS Compliance

Features

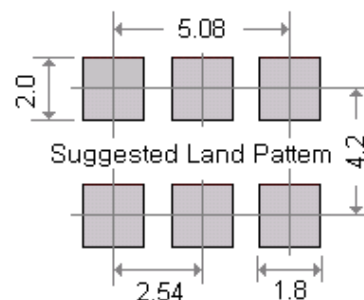
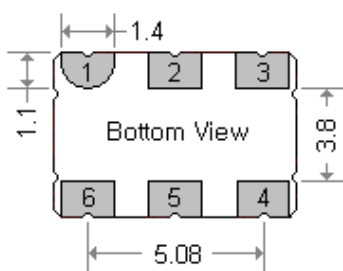
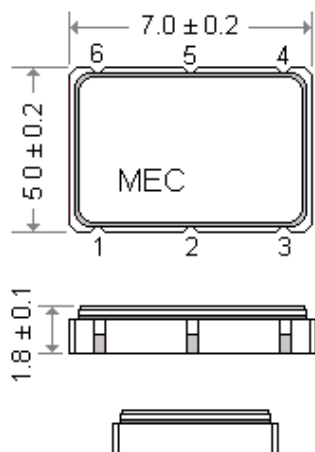
The GTQF, GPQF and GDQF Series are members of Mercury's Q-Family Quick-Turn crystal oscillators that can be delivered within days. With low current consumption (54 mA for LVPECL 622.080 MHz at 3.3V) and an integrated phase jitter performance of 1.0 pS RMS, they have gained its precision frequency control market position by providing engineers with next-day samples for prototypes and low cost, fast delivery for volume production. The perfect solution to replace traditional XO's & VCXO's that use a more expensive, high frequency, fundamental crystal and a noisy PLL multiplier circuit



General Specifications

Parameters					Electrical Spec.					
Input Voltage (V _{DD})					3.3 V ± 5 %					
Frequency Range					10 ~ 1450 MHz					
Output Wave Form					LVPECL output					
Output Logic High " 1 "					V _{DD} - 1.03 (min.) , V _{DD} - 0.6 (max.)					
Output Logic Low " 0 "					V _{DD} - 1.85 (min.) , V _{DD} - 1.6 (max.)					
Output Load					Differential					
Rise Time (Tr) / Fall Time (Tf)					0.2 n sec. (typical) ; 0.5 n sec. (max.) [20% ↔ 80% waveform]					
Duty Cycle					50% ± 5%					
Start - Up Time (Ts)					10 m sec. (typical)					
Storage Temperature					- 50°C to 100°C					
Aging					± 2 ppm per year (max.)					
Current with Output					16 mA					
Current Consumption (V _{DD} = + 2.5V)					100 MHz	250 MHz	500 MHz	750 MHz	1 GHz	1.35 GHz
All values are typical and over the operating temperatures.					48 mA	50 mA	55 mA	59 mA	62 mA	68 mA
Frequency Stability ⁽¹⁾ Codes	Frequency Stability over Operating Temperature Range			± 25 ppm	± 50 ppm	± 100 ppm	If non-standard, please enter the desired stability after the " C " or " I " represents .			
	Commercial (-10°C to +70°C)			A	B	C	For example : " C20 " ± 20 ppm over -10°C to +70°C ; " I20 " ± 20 ppm over -40°C to +85°C			
	Industrial (-40°C to +85°C)			D	E	F				
SSB Phase Noise [dBc / Hz (typical)]	Offset	77.76 MHz	122.88 MHz	125 MHz	156.25 MHz	212.5 MHz	491.52 MHz	622.08 MHz	1 GHz	1.25 GHz
	10 Hz	-57	-68	-63	-55	-62	-61	-48	-52	-42
	100 Hz	-94	-99	-94	-85	-93	-86	-85	-82	-81
	1 KHz	-114	-113	-113	-109	-105	-100	-101	-93	-93
	10 KHz	-123	-119	-118	-116	-113	-105	-102	-97	-96
	100 KHz	-124	-120	-119	-118	-115	-105	-103	-97	-97
	1 MHz	-144	-140	-137	-139	-135	-126	-124	-116	-119
10 MHz	-152	-148	-146	-146	-143	-137	-133	-127	-129	
Phase Jitter (12KHz ~ 20 MHz, RMS) unit : pS.		0.5	0.6	0.5	0.6	0.6	0.6	0.5	0.7	0.6
Control Voltage Function on Pad 1										
Supply Voltage (V _{DD})		V _{DD} = +3.3 V ; Vcon Center = +1.65V								
Vcontrol Range		+ 0.3V ~ +3.0V								
Frequency Pulling Range		± 100 ppm (min.) Up to ± 200 ppm (min.) is also available. Please contact Mercury.								
Absolute Voltage		2.8 V max. for 2.5V V _{DD} ; 4.0 V max. for 3.3V V _{DD}								
Linearity	± 5% typical. ±10% (max.)				Input Impedance		1 MΩ typical			
Transfer Function	Positive Transfer				Bandwidth		10 KHz min. Measured at -3 dB			

General Specifications (Unit : mm)



Pad 1	Control Voltage	Pad 4	LVPECL Differential
Pad 2	OE: High Enable	Pad 5	Complimentary
Pad 3	Ground	Pad 6	Supply Voltage