Quick - turn VCXOs — *GDQF536 series* — **F** *group* — *2.5 V*

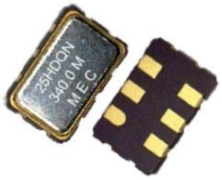
SMD LVDS Differential
5.0 x 3.2 x 1.2 mm

1.0 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 forvolume production. The perfect solution to replace traditional XO's & VCXO's that use a more expensive, highfrequency, fundamental crystal and a noisy PLL multiplier circuit

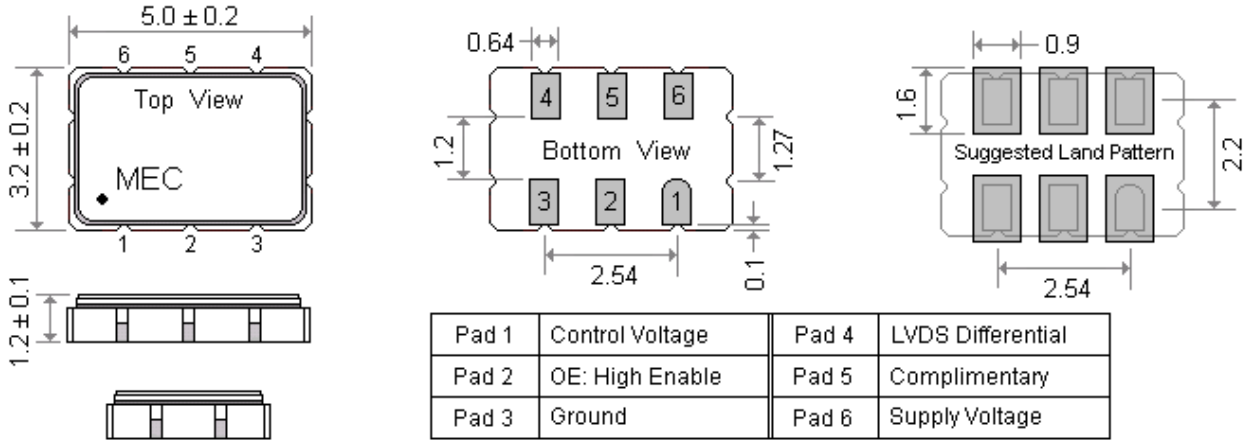


General Specifications

Paramenters				Electrical Spec.					
Input Voltage (V_{DD})				2.5 V ± 5 %					
Frequency Range				10 ~ 1450 MHz					
Output Wave Form				LVPECL output					
Output Logic High " 1 "				1.4 V Typical , 1.6 V max.					
Output Logic Low " 0 "				1.1 V Typical , 0.9 V min.					
Output Load				Differential					
Rise Time (Tr) / Fall Time (Tf)				0.2 n sec. (typical) ; 0.4 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.				16 mA	18 mA	21 mA	22 mA	24 mA	26 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 . For example : " C20 " ± 20 ppm over -10°C to +70°C ; " I20 " ± 20 ppm over -40°C to +85°C			
	Commercial (*-10°C to +70°C*)		*A*	*B*	*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.		0.9	0.8	1.1	0.9	1.0	1.1	1.2	1.5	1.1

Control Voltage Function on Pad 1					
Supply Voltage (V_{DD})	V_{DD} = +2.5 V ; Vcon Center = +1.25V				
Vcontrol Range	+ 0.2V ~ +2.3V				
Frequency Pulling Range	± 90 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	LVDS Differential
Pad 2	OE: High Enable	Pad 5	Complimentary
Pad 3	Ground	Pad 6	Supply Voltage

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