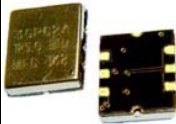
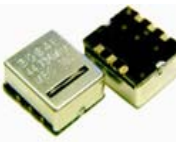


Voltage Controlled Crystal Oscillators (VCXOs) Product Selection Guide



Output Wave Form and Logic	Square Wave			True Sine Wave		
						
	CMOS	PECL	LVDS	10 kΩ // 10 pF	50 Ω load	
 G14 , full size 4 pin DIP	 G8 , half size 4 pin DIP	 G534 , 4 pad, ceramic SMD 5x3.2x1.5mm	 G574 , 4 pads, ceramic SMD 5x7x2.5mm	 G576 , 6 pads, ceramic SMD 5x7x1.8mm	 G62 , 6 pads Ceramic SMD 9.6x11.4x2.5 mm	 G64 , 6 pads ceramic SMD 9.6x11.4x4.7 mm
For RoHS: G14G	For RoHS: G8G	RoHS compliant and lead free product			For RoHS: G62G	For RoHS: G64G

Square Wave Output Availability by sub-Models

Output Logic	Main Model	5x3.2 mm	5x7 mm	9.6x11.4 mm, 6 pad	9.6x11.4x4.7 mm, 6 pad	Full size 4 pin DIP	Half size 4 pin DIP
CMOS	G__	G534	G576 GV576 GA576 GW576 GF576	G62 GV62 GA62 GW62 GF62	G64 GV64 GA64 GW64 GF64	G14 GV14 GA14 GW14 GF14	G8 GV8 GA8 GW8 GF8
	GL__	Coming soon. Please check with Mercury for availability	GL574	GL62	GL64	GL14	GL8
PECL	GP__		GPA576 GPW576 GPF576	GPA62 GPW62 GPF62	GPA64 GPW64 GPF64	GPA14 GPW14 GPF14	GPA8 GPW8 GPF8
LVDS	GD__		GDA576 GDW576 GDF576	GDA62 GDW62 GDF62	GDA64 GDW64 GDF64	GGDA14 GDW14 GDF14	GDA8 GDW8 GDF8

How to Order Mercury VCXO:

VCXO Part Number Format.								Example: 3GPF576A-80T-155.520
								= Customer Specifications
3	GPF62	G	A	—	80	T	—	155.520
(1)	(2)	(3)	(4)	dash	(5)	(6)	dash	(7)
								(Example)
(1): Input Voltage: "25" for +2.5V; "3" for +3.3V; "5" for +5.0V. (2): Package Code. 6 pad 9.6x11.4x2.5 mm SMD in this example. PECL output logic, GPF series. (3): Add "G" if RoHS compliance required, leave blanks if not. No "G" is needed for all 5x3.2 and 5x7 SMD as they are RoHS compliant and lead. (4): Frequency Stability Code: A~F. (5): Pulling Range in ± ppm. (6): range code. "N" for minimum, "M" for maximum, "T" for typical, ±20% tolerance) (7): Frequency in MHz.								



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Voltage Controlled Crystal Oscillators (VCXOs)

Product Selection Guide



Main Model General Specification Comparisons

(Depends on the supply voltage, package, frequency output and output logic type, the sub-model specifications may vary)

Supply Voltage		Square Wave						Sine Wave		
		G Series	GL Series	G_A Series	G_V Series	G_W Series	G_F Series	GSA Series	GSR Series	GS Series
Circuit Design		Fundamental mode crystal	Multiplier	Non-PLL or Fundamental mode crystal	PLL	Low jitter PLL	Ultra low jitter PLL	Non-PLL or Fundamental mode crystal	Fundamental mode crystal	Ultra low jitter PLL
Supply Voltage vs Frequency Range.	3.3 V	0.625~50.0 MHz	50~156 MHz	50~200 MHz	12~200 MHz	0.75 ~ 800 MHz	38 ~ 640 MHz	50~200 MHz	10~30 MHz	10~320 MHz
	5.0 V	10.0~40.0 MHz	50~156 MHz	50~200 MHz	N / A	N / A	N / A	50~100 MHz	10~30 MHz	10~156 MHz
Phase Jitter		< 1 ps	Moderate jitter	Ultra low. < 0.5 ps	Moderate jitter	Low Jitter	Ultra low. < 1 ps	Ultra low. < 1 ps	Ultra low. < 1 ps	Low Jitter
Input Impedance		1.0 MΩ	50 K	130 KΩ	2MΩ	2MΩ	60KΩ	2MΩ	1.0 MΩ	50 K
Modulation Bandwidth (min.), -3 dB		20 KHz	20 KHz	25 KHz	25 KHz	25 KHz	25 KHz	25 KHz	20 KHz	20 KHz
Logic / Load		CMOS	CMOS	CMOS, PECL, LVDS	CMOS	CMOS, PECL, LVDS	CMOS, PECL, LVDS	50 Ω	10 KΩ // 10 pF	50 Ω
Features		Low cost	General purpose	High performance	Low cost	General purpose	High performance	High Spectral purity	Low cost	General purpose

Phase Noise and Jitter Comparisons.

All at +3.3V and Vcontrol =0.0 V

Phase Noise (dBc/Hz) typical									Jitter (ps) typical						
Offset		10 Hz	100 Hz	1 KHz	10 KHz	100 KHz	1 MHz	10 MHz	Integrated Phase (12 KHz ~ 20 MHz) (RMS)	Frequency					
35.328 MHz		G	-70	-105	-132	-142	-145	-150		35.328 MHz	1	---	---	---	---
77.760 MHz	GL	-75	-110	-125	-135	-128	-133	-135		77.760 MHz	---	3	0.28	2.7	0.64
	GA	-65	-95	-125	-140	-148	-152	-152		155.520 MHz	---	4	0.25	2.3	0.46
	GV	-72	-100	-123	-130	-125	-125	-143		311.020 MHz	---	---	---	2.6	0.46
	GW	-72	-100	-122	-130	-125	-125	-143		622.080 MHz	---	---	---	5.0	0.51
	GF	-65	-95	-123	-135	-132	-145	-148	Period (RMS)	35.328 MHz	2	---	---	---	---
155.520 MHz	GL	-72	-103	-126	-133	-128	-130	-132		77.760 MHz	---	6	2.5	3.5	4.5
	GA	-75	-105	-125	-135	-142	-148	-150		155.520 MHz	---	7	3	4	3.0
	GV	-65	-95	-120	-128	-122	-120	-140		311.020 MHz	---	---	---	3.0	4.0
	GW	-65	-95	-120	-125	-121	-120	-140		622.080 MHz	---	---	---	3.8	6.0
311.020 MHz	GF	-62	-92	-120	-132	-128	-144	-150	Period (Peak-to-Peak)	35.328 MHz	14	---	---	---	---
	GW	-59	-86	-116	-129	-124	-140	-148		77.760 MHz	---	32	18	25	32
	GF	-60	-90	-118	-135	-142	-148	-150		155.520 MHz	---	35	25	27	20
622.080 MHz	GW	-55	-85	-109	-115	-110	-110	-128		311.020 MHz	---	---	---	25	28
	GF	-48	-80	-108	-118	-114	-131	-138		622.080 MHz	---	---	---	35	40



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