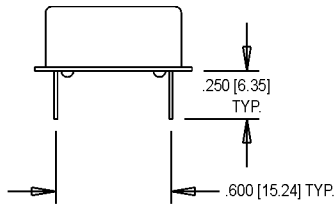


K1528D Series

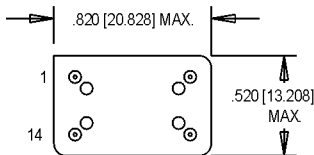
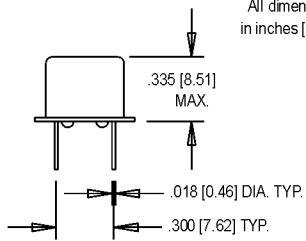
14 pin DIP, 5.0 Volt, CMOS, VCXO



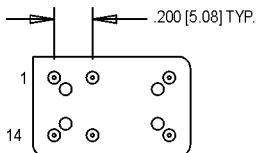
- Former **Champion** product
- Phase-Locked Loops (PLL's), Clock Recovery, Reference Signal Tracking, Synthesizers, Frequency Modulation/Demodulation



All dimensions in inches [mm].



OPTIONAL 6-PIN PACKAGE WITH TRISTATE



Pin Connections

PIN	FUNCTION
1	Voltage Control
7	Ground/Case Ground
8	Output
14	+Vdd

Ordering Information

Product Series	K1528D	X	X	X	X	-R	00.0000 MHz
Model Selection							
B:	±100 - ±150 ppm Pull						
D:	±60 - ±110 ppm Pull						
Symmetry/Logic Compatibility							
Blank:	CMOS 40%/60%						
S:	CMOS 45%/55%						
Temperature Range							
Blank:	0°C to +70°C						
M:	-40°C to +85°C						
Tri-State Option							
Blank:	No Tristate						
E:	Tristate Option						
RoHS Compliance							
Blank:	non-RoHS compliant part						
-R:	RoHS compliant part						
Frequency (customer specified)							

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
Electrical Specifications	Frequency Range	F	35		85	MHz		
	Operating Temperature	T _A	(See ordering information)					
	Storage Temperature	T _S	-40		+125	°C		
	Frequency Stability Overall	ΔF/F	Inclusive of Calibration, Temperature, Voltage, Load, and Aging					
	0°C to 70°C				±25	ppm		
	-40°C to +85°C				±50	ppm		
	Aging 1 st Year		-5		+5	ppm		
	Thereafter (per year)		-2		+2	ppm		
	Pullability/APR		(See ordering information)					
	Control Voltage	V _c	0.5	2.5	4.5	V		
	Linearity				15	%	Positive Monotonic Slope	
	Modulation Bandwidth	f _m	20			kHz	±3dB	
	Input Impedance	Z _{in}	50k			Ohms	@ 10 kHz	
	Input Voltage	V _{dd}	4.75	5.0	5.25	V		
	Input Current	I _{dd}			40	mA		
Output Type						HCMOS/TTL		
Load		5 TTL or 15 pF HCMOS					See Note 1	
Symmetry (Duty Cycle)		(See ordering information)						
Logic "1" Level	V _{oh}	4.5			V			
Logic "0" Level	V _{ol}			0.5	V			
Output Current				±16	mA			
Rise/Fall Time	T _r /T _f			4	ns			
Start Up Time				10	ms			
Phase Jitter @ 40 MHz	Ö _J		2		ps RMS	Integrated 12 kHz – 20 MHz		
Phase Noise (Typical) @40 MHz		10 Hz	100 Hz	1 kHz	10 kHz	Offset from Carrier		
		-65	-95	-115	-140	dBc/Hz		
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 mS duration, ½ sinewave)						
	Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)						
	Hermeticity	Per MIL-STD-202, Method 112, (1x10 ⁻⁸ atm. cc/s of Helium)						
	Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min. dwell, 10 cycles)						
	Solderability	Per EIAJ-STD-002						
Soldering Conditions	+240°C max. for 10 secs.							

1. TTL load - see load circuit diagrams #1 and #2
2. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with HCMOS load.

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.