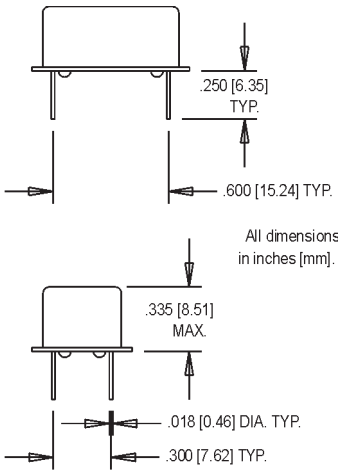
K1528D Series
14 DIP, 5.0 Volt, CMOS, VCXO

- Former Champion Technologies, Inc. Product
- Phase-Locked Loops (PLL's), Clock Recovery, Reference Signal Tracking, Synthesizers, Frequency Modulation/ Demodulation

Ordering Information

K1528D X X X X 00.0000 MHz

- **Product Series**
- **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
- **Frequency (customer specified)**



Pin Connections

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

Electrical Specifications

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
Frequency Range	F	35		105	MHz	
Operating Temperature	TA	(See Ordering Information)				
Storage Temperature	Ts	-40		+125	°C	
Frequency Stability	ΔF/F					
Overall		Inclusive of Calibration, Temperature, Voltage, Load, and Aging				
0°C to +70°C				±25	ppm	
-40°C to +85°C				±50	ppm	
Aging						
1st Year		-5		+5	ppm	
Thereafter (per year)		-2		+2	ppm	
Pullability/APR		(See Ordering Information)				
Control Voltage	Vc	0.5	2.5	4.5	V	
Linearity				15	%	Positive Monotonic Slope
Modulation Bandwidth	fm	20			kHz	±3dB
Input Impedance	Zin	50k			Ohms	@ 10 kHz
Input Voltage	Vdd	4.75	5.0	5.25	V	
Input Current	Idd			40	mA	
Output Type						HCMOS/TTL
Load		5 TTL or 15 pF HCMOS				See Note 1
Symmetry (Duty Cycle)		(See Ordering Information)				See Note 2
Logic "1" Level	Voh	4.5			V	
Logic "0" Level	Vol			0.5	V	
Output Current				±16	mA	
Rise/Fall Time	Tr/Tf			4	ns	
Start up Time				10	ms	
Phase Jitter @ 40 MHz	ϕ J		2		ps RMS	Integrated 12 kHz - 20 MHz
Phase Noise (Typical)	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
@ 40 MHz	-65	-95	-115	-120	-140	dBc/Hz

1. TTL load - see load circuit diagram #1 on page 116. HCMOS load - see load circuit diagram #2 on page 116.
2. Symmetry is measured at 1.4 V with TTL load, and at 50% Vdd with HCMOS load.

VCXO