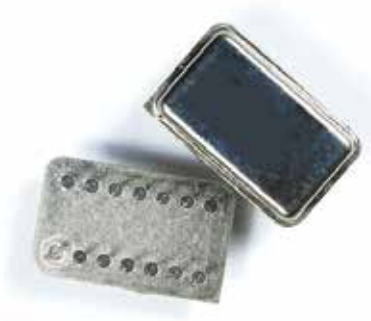
MIL-55310/14-Series Specifications



0.887L x 0.540W x 0.200H (in)

PDI *MIL-PRF-55310/14* Oscillators are available in both standard and custom frequencies to provide precision timing in a hermetically sealed package for military and space applications. PDI provides quick-turn sampling for your proto-typing needs, mass production capability, and competitive pricing.

ex) **M55310/14—B—09—A—25M00000**

MILITARY SLASH SHEET

PRODUCT LEVEL
B = Hi-Rel
C = Commercial
S = Space

DASH NUMBER
See Chart Below

OPERATING TEMPERATURE
A = -55°C to +125°C
B = -55°C to +105°C
C = -20°C to +70°C

XXXXXXXX
Specified
Nominal
Frequency

Dash No. Package	Frequency Range	Supply Voltage Vdc	Supply Current mA Max.	Rise/Fall Times nS Max.	Duty Cycle @ 1.4 Vdc	Output Voltage		Operating Temperature		
						Logic: 1 Min.	Logic: 0 Min	(A)	(B)	(C)
05	750 KHz – 2.5 MHz	+5.0 ±0.5	50	15	45 to 55%	2.4 Vdc at 400 µA Sorce	0.5 Vdc at 16 mA Sink	±50	±40	±30
06	2.5 MHz – 5 MHz	+5.0 ±0.5	40	15	45 to 55%			±50	±40	±30
07	5 MHz – 10 MHz	+5.0 ±0.5	30	15	45 to 55%			±50	±40	±30
08	10 MHz – 15 MHz	+5.0 ±0.5	20	15	40 to 60%			±50	±40	±30
09	15 MHz – 25 MHz	+5.0 ±0.5	20	5	40 to 60%			±50	±40	±30

Aging Per Year (Max.)	5 ppm
Per 30 Days	±0.7 ppm
Per 90 Days	±1.5 ppm

NOTES:
All product supplied in anti-static packaging.
A TTL unit load is defined as: 1.60 mA sink, 0.04 mA source, and 2.00 pF capacitance.
At +70°C ± 2.0°C, intervals not more than every 72 hours for a minimum of 30 days.
The product described in this spec. consist of this specification and MIL-PRF-55310.
Decimal XXX = ± .005, XX = ± .020 *Metric* [XXX = ± .13], [XX = ± .50]
Specifications subject to change without notice, last updated 4/1/1 3.

Parameter		Frequency Range 0.750000 to 25.000000 MHz	Units
Frequency Stability	vs Temperature (Max.)		ppm
	-20 to +70°C (Type C)	Per Chart	
	-55 to +105°C (Type B)	Per Chart	
	-55 to +125°C (Type A)	Per Chart	
	vs Supply Voltage (±10% charge) (Max.)	±2.0	
	vs Aging (@ +70°C ± 2.0°C) (Max.)	5 Per Year	
	Per 30 Days	±0.7	
	Per 90 Days	±1.5	
	Tolerance (@ +25°C ± 1.0°C) (Max.) Within 30 Days of Shipment	±15.0	
Temperature Range	Operating	Per Chart	°C
	Storage	-62 to +125	
Supply Voltage	±10.0 %	+5.0	Vdc
Output		TTL	Vdc
Load		1 – 10	TTL
Logic Levels	High (Min.), @ 400 uA Source	2.4	Vdc
	Low (Max.), @ 16 mA Sink	0.5	

Test Inspection	Product Level **S** Method Condition	Product Level **B** & **C** Method Condition
Internal Visual	See 4.4.1	See 4.4.1
Stabization bake (prior to seal) 1/	MIL-STD-883, method 1011, Condition C (+150°C) 48 hours min.	MIL-STD-883, method 1011, Condition C (+150°C) 48 hours min.
Thermal Shock	MIL-STD-883, method 1011, Condition A	N/A
Temperature Cycling	MIL-STD-883, method 1010 Condition B	MIL-STD-883, method 1010 Condition B
Constant Acceleration	MIL-STD-883, method 2001. Condition A, Y1 only (5000 g's)	MIL-STD-883, method 2001. Condition A, Y1 only (5000 g's)
Seal (Fine and Gross Leak) 2/	See 4.8.2.2.2	See 4.8.2.2.2
Particle Impact Noise Detection (PIND)	MIL-STD-883, method 2020 Condition B	N/A
Electrical Test:		
Input Current Power	4.8.5	N/A
Output Waveform	4.8.20	N/A
Output Voltage-Power	4.8.21	N/A
As Specified	3.1	3.1
Burn-In (Load)	+125C, nominal supply voltage and burn-in load, 240 hours minimum	+125C, nominal supply voltage and burn-in load, 160 hours minimum
Electrical Test:	Nominal and extreme supply voltages, specified load, +23°C and temperature extremes, record all test parameters by serial number	Nominal supply voltages, specified load, +23°C and verify frequency at the temperature extremes
Input Current Power	4.8.5	4.8.5
Output Waveform	4.8.20	4.8.20
Output Voltage-Power	4.8.21	4.8.21
As Specified	3.1	3.1
Radiographic 3/	MIL-STD-883, method 2020	N/A

PRECISION DEVICES INC

PACKAGE DIMENSIONS

PIN	CONNECTION
1-3	No Connect
4	Supply Voltage
5	Output
6	No Connect
7	Ground/Case
8-14	No Connect