MIL-55310/25-Series Specifications

A – 0.887L x 0.540W x 0.200H (in)
B – 0.815L x 0.515W x 0.200H (in)

PDI *MIL-PRF-55310/25* Oscillators are available in both standard and custom frequencies to provide precision timing in a hermetically sealed package for military and avionics applications.

ex) **M55310/25—B—02—A—25M00000**

MILITARY SLASH SHEET

PRODUCT LEVEL
B = Hi-Rel
C = Commercial

DASH NUMBER
See Chart Below

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

XXXXXXXX
Specified
Nominal
Frequency

Dash No. Package A	Dash No. Package B	Frequency Range	Input Current (1) 5.25 V ±5% Max	Rise/Fall Times Max	Duty Cycle @ 1.4 Vdc	Load (test) to -2.0Vdc	Initial Accuracy @ 23°C ppm Max	Aging Per Year ppm Max	Operating Temperature (A)	Operating Temperature (B)	Operating Temperature (C)
02	03	25 MHz to 60 MHz	50 mA	3.5 nS	40 to 60%	50 Ω	±15	±5	±65	±55	±40
06	07		75 mA			100 Ω					
10	11	25 MHz to 60 MHz	50 mA	3.5 nS	40 to 60%	50 Ω	±25	±10	±100	±75	±50
14	15		75 mA			100 Ω					

Aging Per Year (Max) (Shall be in accordance with MIL-PRF-55310)	**±5 ppm**	**±10 ppm**
Per 30 Days	±0.7 ppm	±1.5 ppm
Per 1 Year After 30 Days	±5 ppm	±10 ppm

Environmental Specifications	
Vibration, sinusoidal	MIL-STD-202 , Method 204, **Non-operating:** Test Condition D, **Operating:** Not Required
Shock (Non-operating)	MIL-STD-202 , Method 213 , Condition I
Thermal Shock (Non-operating)	MIL-STD-202 , Method 107 , Condition B
Ambient Pressure	**Non-operating:** IAW MIL-PRF-55310 , **Operating:** MIL-STD-202 , Method 105 , Condition C
Resistance to Soldering Heat	MIL-STD-202 , Method 210 , Condition E
Moisture Resistance	MIL-STD-202 , Method 106
Terminal Strength	MIL-STD-202 , Method 211 , Condition C **Applied Force:** 2 pounds each terminal for 10 seconds , **Bends:** 5 at 45 degrees each
Solderability	MIL-STD-202 , Method 208
Resistance to Solvents	MIL-STD-202 , Method 215

The product described in this spec. consist of this specification and MIL-PRF-55310.
Decimal XXX = ± .005, XX = ± .020 *Metric* [XXX = ± .13], [XX = ± .50]

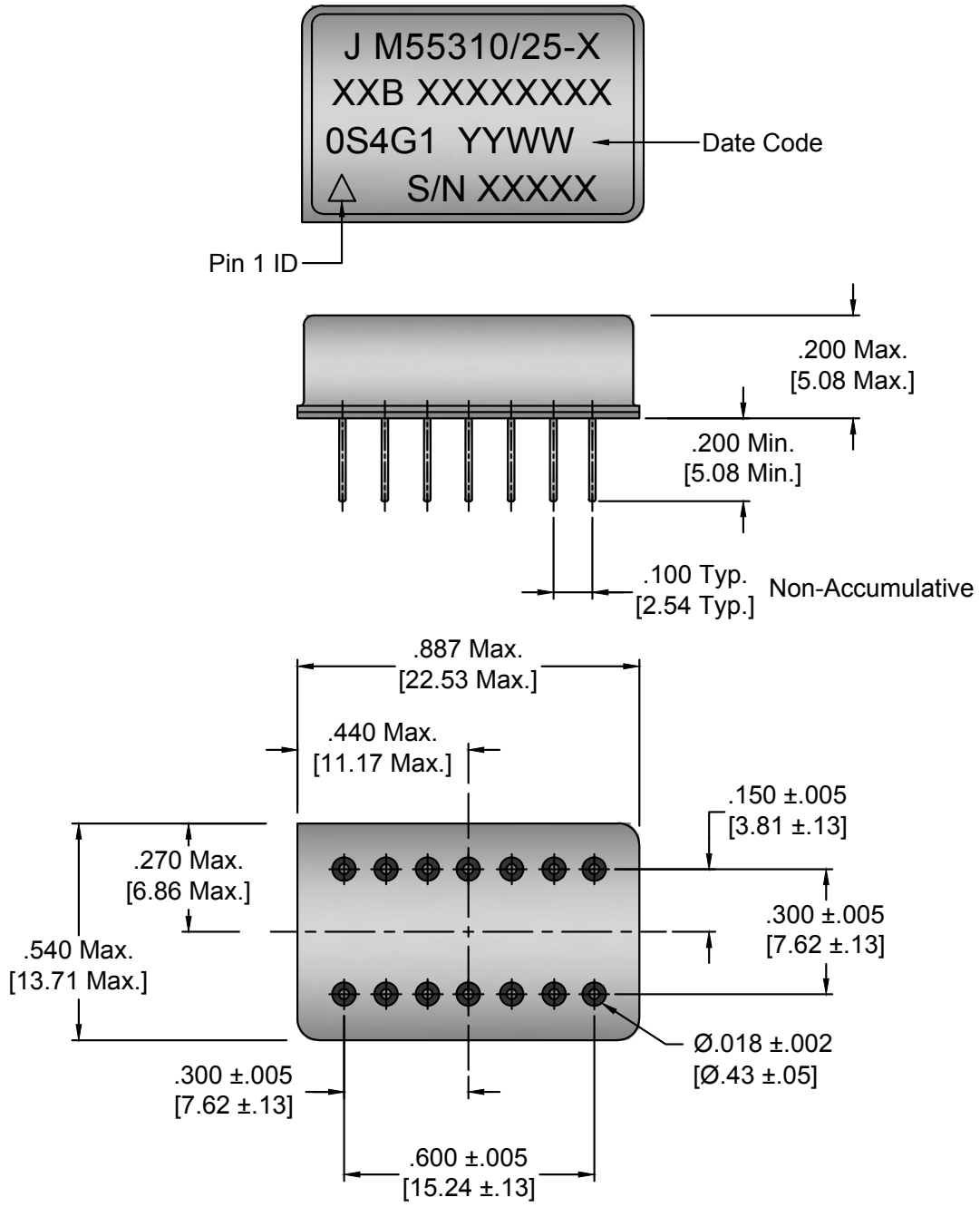
Parameter		Frequency Range 25MHz to 60MHz	Units
Frequency Stability	vs Temperature (Max)		ppm
	-20 to +70°C (Type C)	Per Chart	
	-55 to +105°C (Type B)	Per Chart	
	-55 to +125°C (Type A)	Per Chart	
	vs Supply Voltage (Max. for a 5% change) (Measurements taken at reference temperature and operating temperature range end points)	±1.0	
	vs Environmental	±3.0	
	Initial Accuracy (@ +23°C ±1.0°C) Within 30 Days of Shipment	Per Chart	
Temperature Range	Operating	Per Chart	°C
	Storage	- 62 to +125	
Output		ECL	
Start-up Time	(Max)	15	mS
Supply Voltage	±5.0 %	-5.2	Vdc
Logic Levels	Logic 1 (Min)	-1.15	Vdc
	Logic 0 (Max)	-1.54	

Test Inspection	Product Level B Method Condition
Internal Visual	MIL-STD-883, Method 2017 and 2032
Stabization bake (prior to seal) 1/	MIL-STD-883, Method 1011, Condition C (+150°C) 48 hours min.
Temperature Cycling	MIL-STD-883, Method 1010 Condition B
Constant Acceleration	MIL-STD-883, Method 2001. Condition A, Y1 only (5000 g's)
Seal (Fine and Gross Leak) 2/	MIL-STD-883, Method 1014
Burn-In (Load)	+125C, nominal supply voltage and burn-in load, 160 hours minimum
Electrical Test:	Nominal supply voltages, specified load, +23°C and verify frequency at the temperature extremes
Input Current Power	4.8.5 of MIL-PRF-55310
Output Waveform	4.8.20 of MIL-PRF-55310
Output Voltage-Power	4.8.21 of MIL-PRF-55310
As Specified	3.1 of MIL-PRF-55310

PACKAGE DIMENSIONS

Configuration A

PIN	CONNECTION
1-6	No Connect
7	Supply Voltage
8	Output
9-13	No Connect
14	Ground/Case



PRECISION DEVICES INC

PACKAGE DIMENSIONS

Configuration B

PIN	CONNECTION
1	No Connect
7	Supply Voltage
8	Output
14	Ground/Case