



A Product Line of
Diodes Incorporated



SPECIFICATION FOR APPROVAL

CUSTOMER _____

NOMINAL FREQUENCY 125.000000 MHz

PRODUCT TYPE TYPE PX 7.0x5.0 SEAM SEALED CRYSTAL CLOCK OSCILLATOR

SPEC. NO. (P/N) PXC500006

CUSTOMER P/N _____

ISSUE DATE June 7, 2018

VERSION C

APPROVED	PREPARED	QA

Diodes Incorporated

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*Pb-free
*RoHS Compliant
*HF-Halogen Free
*REACH Compliant

TYPE PX 7.0x5.0 SEAM SEALED CRYSTAL CLOCK OSCILLATOR

PXC500006

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ELECTRICAL SPECIFICATIONS

SRe Part Number : **PXC500006**

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	F ₀	125.000000	MHz	
Frequency Stability	FT	± 25	ppm	**See note
Operating Temperature Range	TR	-20 to +70	°C	
Supply Voltage	V _{CC}	+3.3 ± 10.0%	V	
Logic Type	LT	LVDS		
Supply Current, Output Enabled	I _{CC/OE}	75	mA	Max.
Supply Current, Output Disabled	I _{CC/OD}	30	uA	Max.
Duty Cycle (Symmetry)	DC/SY	45 / 55	%	Measured 50% of Waveform
Rise / Fall Time	T _R /T _F	850	ps	Max. measured 20/80% of Waveform
Output Voltage "0" Level	V _{OL}	1.10 / 0.9	V	Typ. / Min.
Output Voltage "1" Level	V _{OH}	1.43 / 1.6	V	Typ. / Max.
Differential Output Voltage	V _{OD}	247 / 454	mV	Min. / Max.
Output Load		100Ω & 5pF LVDS		
Jitter, Peak to Peak	Pk-Pk	25	ps	Max. 100,000 Random Periods
Start Up Time		10	ms	Max.
Storage Temperature Range		-55 to +125	°C	

※ This product doesn't include harmful substance that stipulated by SONY SS-00259 Level 1 and S-AT2-001 Level 1 standard. RoHS Compliant (Pb - Free).

**Stability includes all combinations of Operating Temperature, Load changes, rated Input (Supply) Voltage changes, Initial Calibration Tolerance (25°C), Aging (5 years at 40°C Average Effective Ambient Temperature), Shock and Vibration.

Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (Pin1), Output Enable	0.7V _{CC}			V	Or Open
Input Voltage (Pin1), Output Disable (low power standby)			0.3V _{CC}	V	Output is Hi-Z
Output Disable Delay			200	ns	
Output Enable Delay			2	ms	

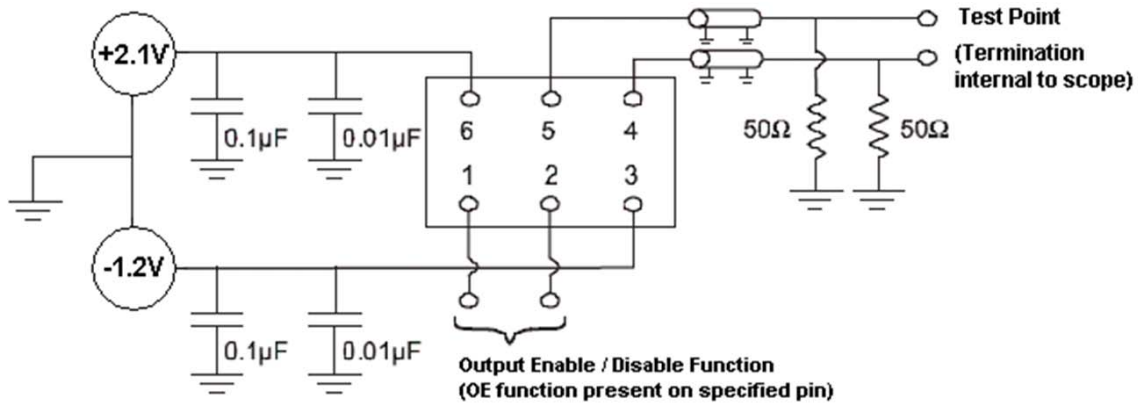


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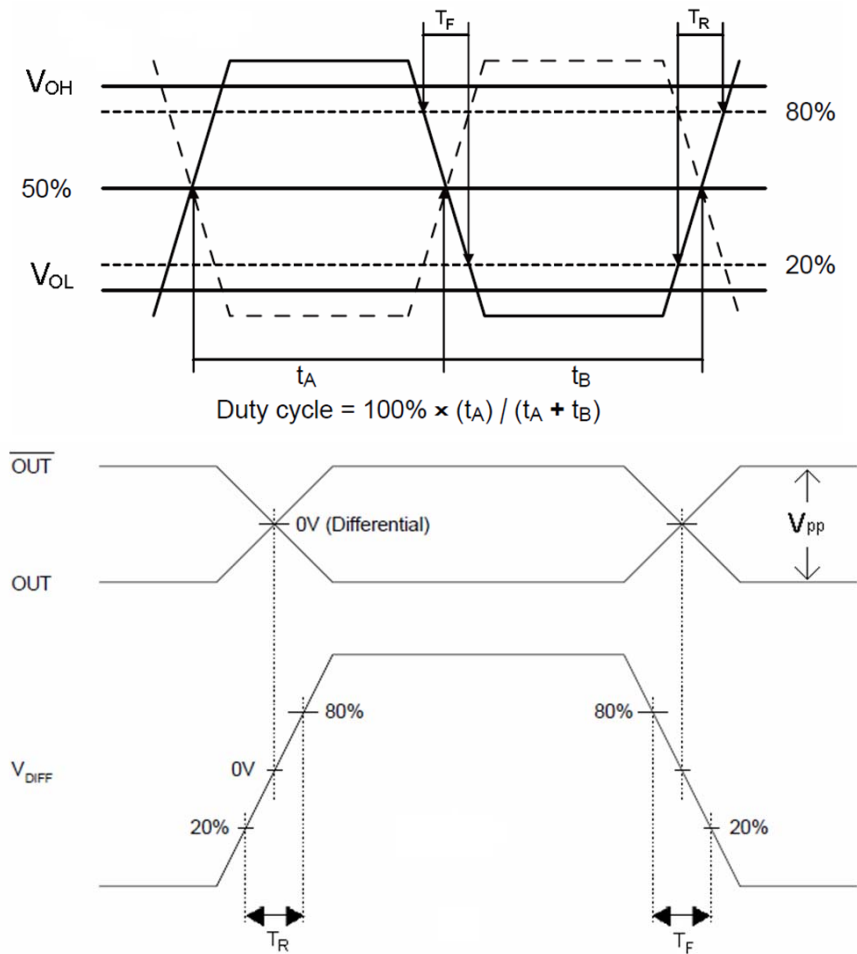
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TEST CIRCUIT



OUTPUT WAVEFORM



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RELIABILITY SPECIFICATIONS

ENVIRONMENTAL:

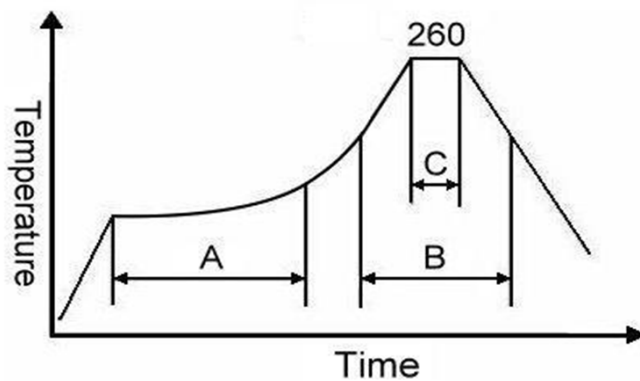
- a) THERMAL SHOCK: MIL-STD-883, Method 1011, Condition A
- b) MOISTURE RESISTANCE: MIL-STD-883, Method 1004
- c) VIBRATION: MIL-STD-883, Method 2007, Condition A
- d) RESISTANCE TO SOLDERING HEAT: J-STD-020D Table 5-2 Pb-free devices (except 2 cycles max)
- e) HAZARDOUS SUBSTANCE: Pb - free and RoHS/ Green Compliant.

MECHANICAL:

- a) SHOCK: MIL-STD-883, Method 2002, Condition B
- b) SOLDERABILITY: JESD22-B102-D Method 2 (Preconditioning E)
- c) TERMINAL STRENGTH: MIL-STD-883, Method 2004, Test Condition D
- d) GROSS LEAK: MIL-STD-883, Method 1014, Condition C
- e) FINE LEAK: MIL-STD-883, Method 1014, Condition A2, $R1=2 \times 10^{-8}$ atm cc/s
- f) SOLVENT RESISTANCE: MIL-STD-202, Method 215

SUGGESTED IR REFLOW PROFILE

*As per IPC-JEDEC J-STD-020D



Note:

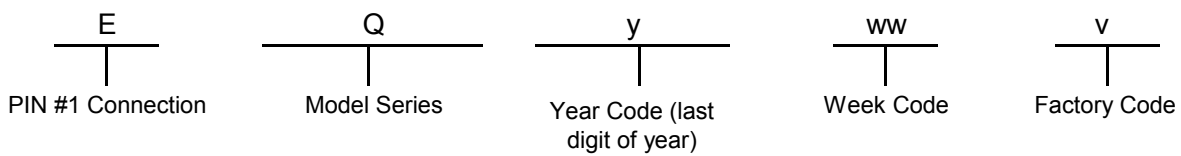
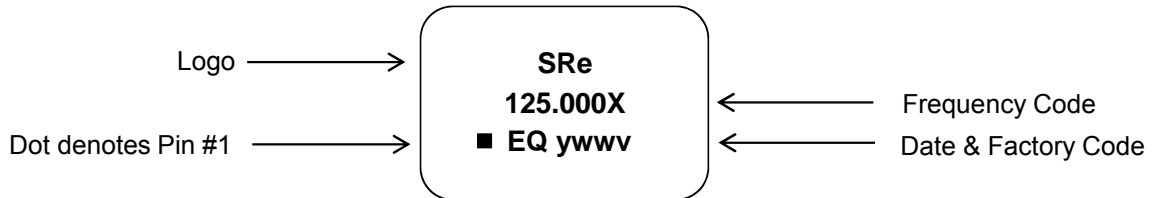
	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

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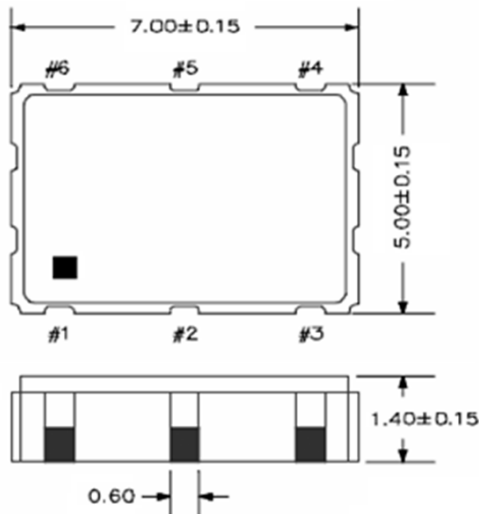
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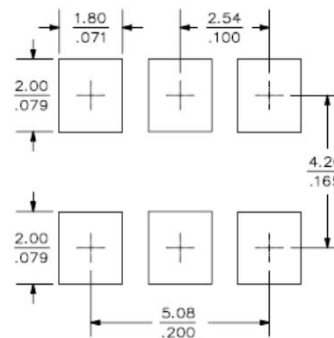
MARKING



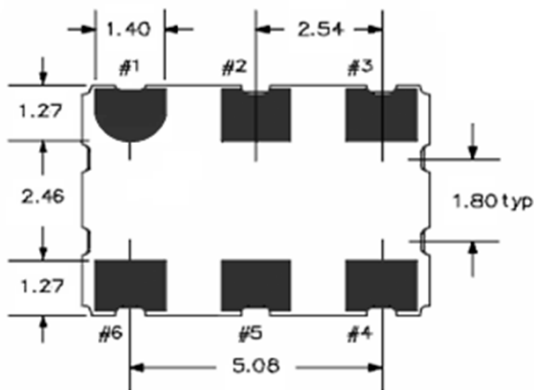
MECHANICAL DRAWINGS (Scale: None. Dimensions are in mm.)



Recommended Land Pattern*



*External high-frequency power decoupling is recommended. (see test circuit for minimum recommendation). To ensure optimal performance, do not route traces beneath the package.



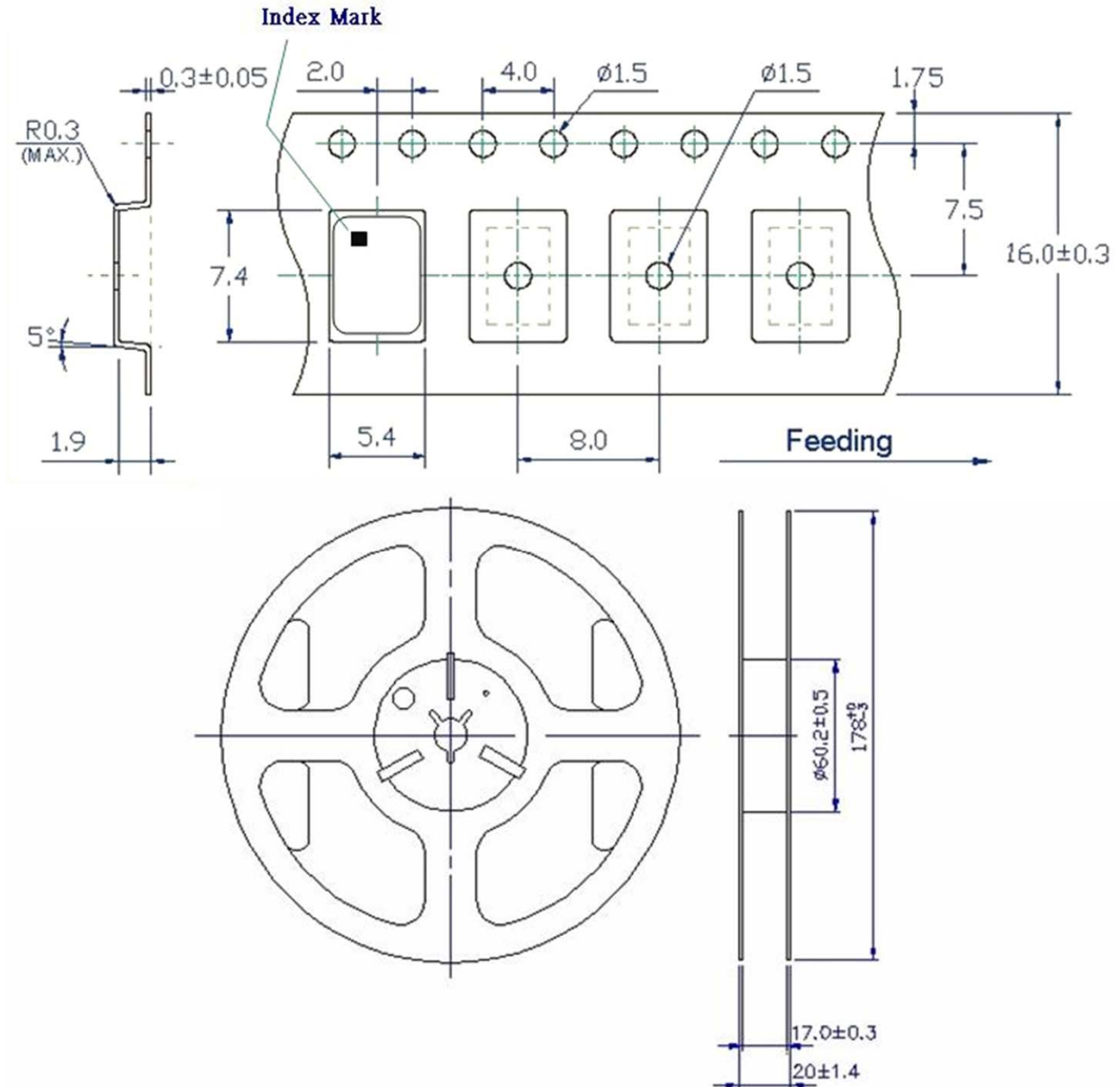
Pin	Function
1	EN
2	NC
3	V _{EE}
4	OUTPUT
5	OUTPUT N
6	V _{CC}

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TAPE & REEL



1. 230mm minimum leafer which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

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PACKING

