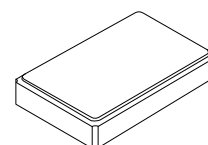


XO6000

156.250000 MHz
XO



SM5032-6 Case

Features:

- Surface Mount Seam Weld Package
- Excellent Reliability Performance
- Good Frequency Perturbation and Stability over temperature
- Moisture Sensitivity Level (MSL) : Level-1

Application:

- 3.3 V Supply Voltage Operation / Complementary LVPECL Output
- Option-able stand-by function for output (Tri-state output)

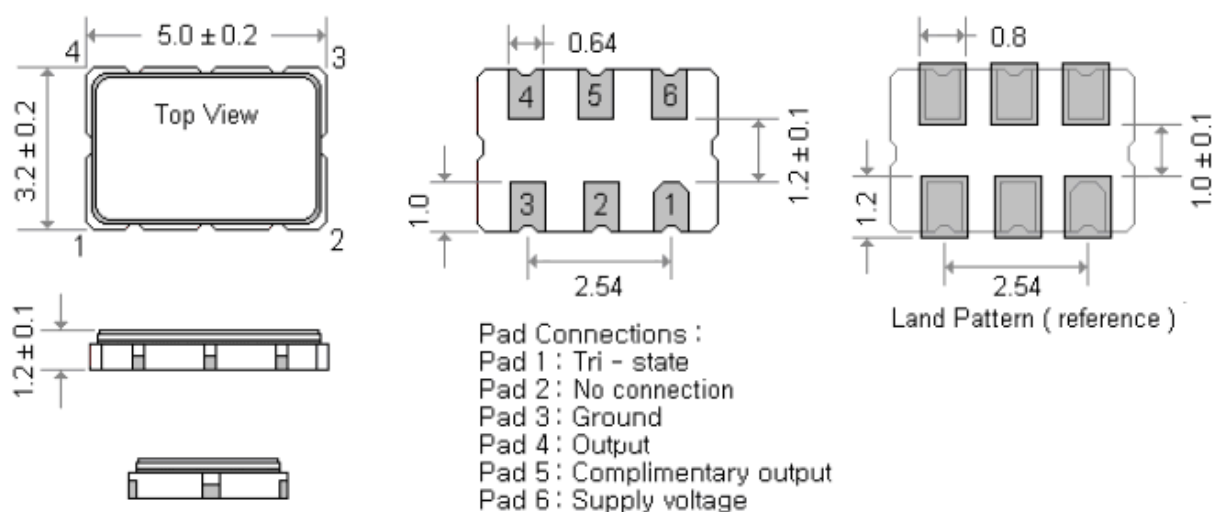
Electrical Characteristics:

XO6000	Specifications
Nominal Frequency, Fo	156.250000 MHz
Storage Temperature Range	-55°C to +150°C
Operating Temperature Range	-40°C to +85°C
Power Supply Voltage, Vcc	3.3 V +/- 5%
Load	50 ohm (LVPECL)
“0” Level “1” Level	0.87 V max 1.47 V min
Output Voltage Swing	595 mV min , 750 mV typ. , 930 mV max
Frequency Tolerance	+/-30 ppm max
Power Supply Current, Icc	30 mA typ 50 mA max
Rise Time (20% -> 80% of final RF level in Vp-p) Fall Time (80% -> 20% of final RF level in Vp-p)	0.3 nsec typ ; 0.5 nsec max. 0.3 nsec typ ; 0.5 nsec max.
Duty Cycle	45% ~ 55%
Start - Up Time	5.0 msec typ. , 10 msec max
RMS Phase Jitter (12K~20MHz)	0.2 ps typ ; 0.5 ps max.
Aging	+/-3.0 ppm /1 st year

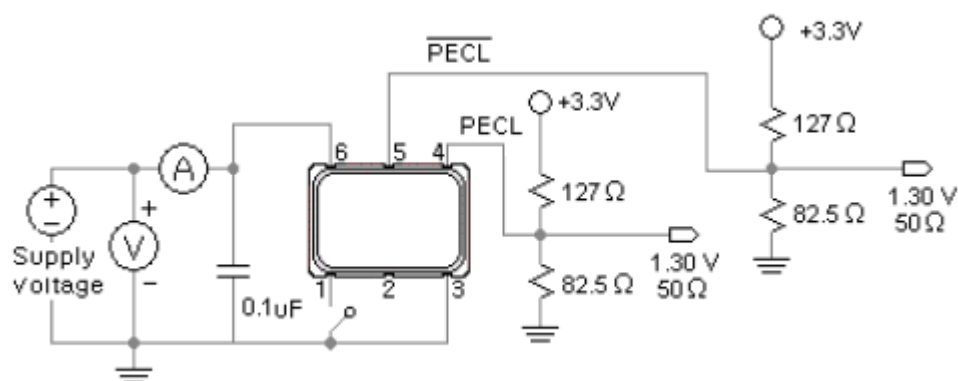
SSB Phase Noise (@10Hz Carrier Offset)	-50 dBc/Hz typ
SSB Phase Noise (@100Hz Carrier Offset)	-80 dBc/Hz typ
SSB Phase Noise (@1KHz Carrier Offset)	-115 dBc/Hz typ
SSB Phase Noise (@10KHz Carrier Offset)	-135 dBc/Hz typ
SSB Phase Noise (@1MHz Carrier Offset)	-142 dBc/Hz typ
SSB Phase Noise (@10MHz Carrier Offset)	-147 dBc/Hz typ
Enable/Disable Function	PIN 1: High or Open, PIN 3:Output Enable PIN 1: Low, PIN 3:Output Disable

#Note 1: Frequency accuracy includes 25C tolerance, operating temperature range -40 to 85 deg C, aging and voltage or load change

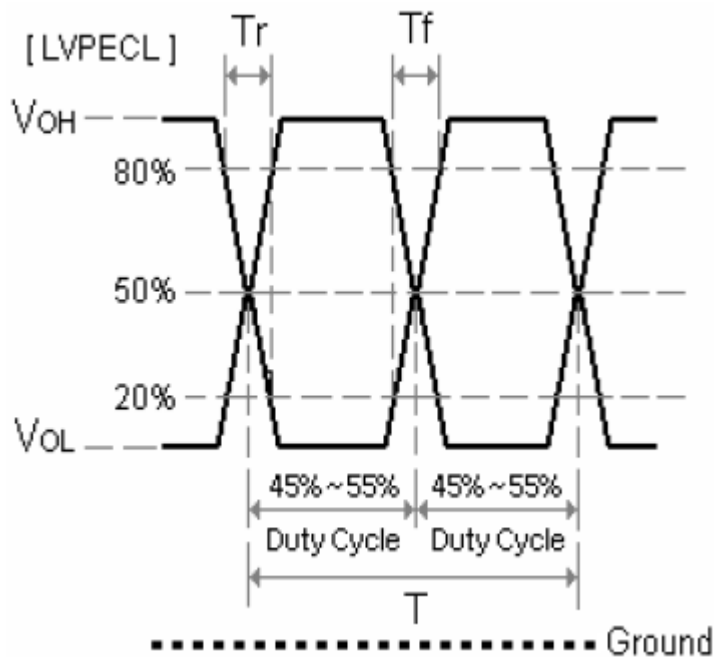
Mechanical Dimensions: (Unit: mm)



Test Circuit:



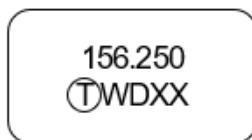
Output Waveform :



Marking:

Line 1 : Frequency (156.250)

Line 2 : $\text{\textcircled{T}}$ WDXX (Product Code + Data Code + internal Traceability Code, Can be 1 or 2 letters, example: XX)



Product Code Table

Year	2017	2018	2019	2020
	2021	2022	2023	2024
	2025	2026	2027	2028
Product code	W	w	<u>W</u>	<u>w</u>

Date Code Table

Date Code Table												
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

1. Reel Dimension (Unit: mm)

Technical drawing of a circular component. The main view shows a circular part with a central hole. A dimension line indicates the outer diameter is $\phi 178.0 \pm 1.0$ and the inner diameter is $\phi 80.0 \pm 1.0$. A detail view, labeled "DETAIL A (5X)", shows a cross-section of the central hole. The detail view includes dimensions for the hole's diameter, $\phi 20.5 \pm 0.2$, and the hole's depth, 12.4 ± 0.3 . The detail view also shows a fillet radius of $R120.0$ and a chamfer dimension of (2.5) . The detail view is labeled "DETAIL A (5X)".

Technical drawing of a mechanical part with dimensions and a detail view.

Main Drawing Dimensions:

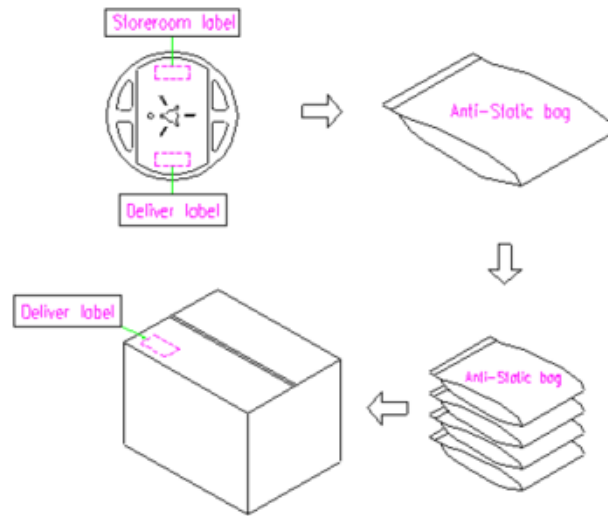
- Overall width: 12.0 ± 0.3
- Overall height: 5.4
- Top edge offset: 1.75
- Bottom edge offset: 5.5
- Top edge hole offset: 2.0
- Top edge hole spacing: 8.0
- Top edge hole diameter: $\phi 1.5 \pm 0.1$
- Top edge hole center-to-center spacing: 4.0
- Bottom edge hole diameter: $\phi 1.5 \text{ MIN.}$
- Bottom edge hole offset: 3.5

Detail View Dimensions:

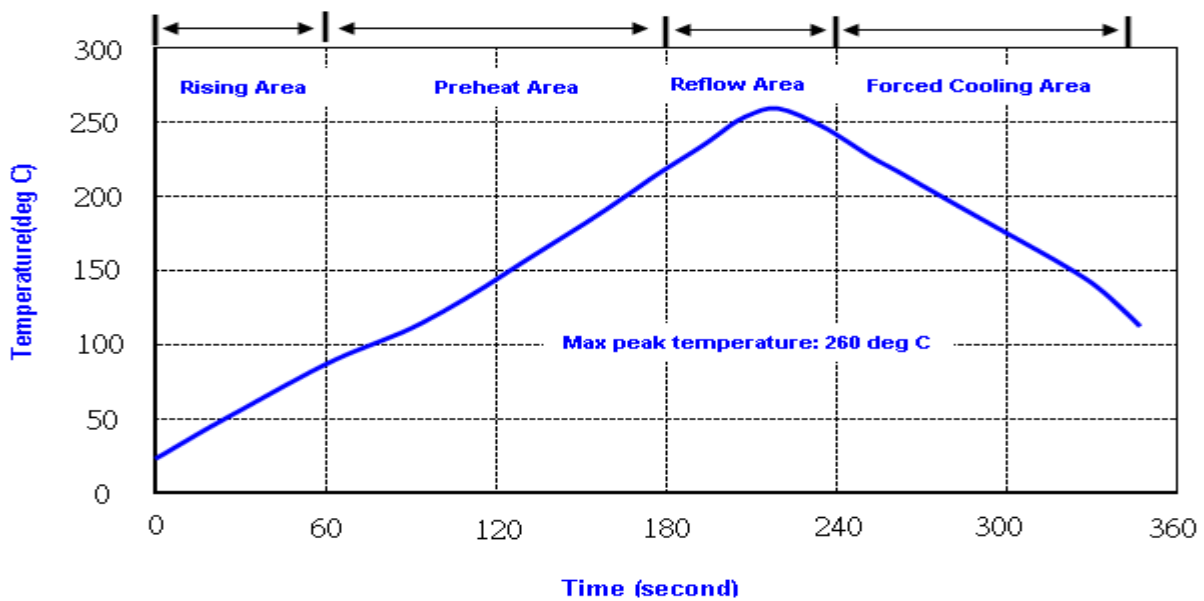
- Detail view shows a cross-section of the part with a width of 1.4 .
- Detail view shows a height of 0.3 ± 0.05 .
- Detail view shows a fillet radius of 5.0° .

1. Unless otherwise specified tolerance on dimension ± 0.1 mm.
2. Material: conductive polystyrene with color black
3. 10 pitch cumulative tolerance ± 0.2 mm.
4. Packing Direction: dot or the logo of marking should be close to the hole of tape.

Packing Quantity/Packing: 1K pcs maximum per reel



Reflow Profile:



Note: 1. Max peak temperature: 260 $\pm$ 5 deg C; Time: 10 $\pm$ 2 sec
2. Temperature: 217 $\pm$ 5 deg C; Time: 90~100 sec

Reliability Specifications

Test name	Test process / method	Reference standard
Mechanical characteristics		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 265°C /10sec ×2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 2000 Hz Sweep period : 20 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202G method 204
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202G method 213
Solderability	Solder Temperature:265±5°C Duration time: 5±0.5 seconds.	J-STD-002
Environmental characteristics		
Thermal Shock	Heat cycle conditions -40 °C (30min) ↔ 85 °C (30min) * cycle time : 10 times	MIL-STD 883G method 1010.8
Humidity test	Temperature : 85 ± 2 °C Relative humidity : 85% Duration : 96 hours	MIL-STD 202G method 103
Dry heat (Aging test)	Temperature : 125 ± 2 °C Duration : 168 hours	MIL-STD 202G method 108A
Cold resistance (Low Temp Storage)	Temperature : -40 ± 2 °C Duration : 96 hours	IEC 60068-2-1



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.