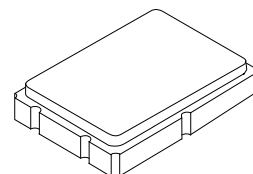


XVC6004B

**204.8 MHz
VCXO**



SM7050-6 Case

Features:

1. 3.3V Operation / PECL Output
2. Enable / Disable Function (6-Pad)
3. Main application: WLAN, SONET/SDH/DWDM, Gigabite Ethernet, Storage Area Network, Digital Video
4. Surface mount 7.0mmx5.0mm crystal oscillator
5. Moisture Sensitivity Level (MSL) : Level-1

Electrical Characteristics:

	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typical	Max.	Unit	
1	Nominal Frequency	FL	204.800000			MHz	
2	Holder Type		-				7.0 * 5.0 * 1.7 mm , 6pads , SMD Type
3	Input Voltage	VDD		3.3		V	D.C ± 5 %
4	Output Wave Form						PECL Differential output
5	Output Voltage High " 1 "	Voh	2.27		2.7	V	VDD - 1.03 (min.) , VDD - 0.6 (max.)
6	Output Voltage Low " 0 "	VoL	1.45		1.7	V	VDD - 1.85 (min.) , VDD - 1.6 (max.)
7	Frequency Stability	F _{opr}	-25		25	ppm	Over Operating Temperature
8	Current Consumption	IDD			74	mA	
	Current with output disabled	I _{op}		16		mA	
9	Rise Time & Fall Time	Tr , Tf		0.2	0.5	n Sec.	20 % ↔ 80 % of waveform
10	Duty Cycle	tw/t	45		55	%	at 50 % waveform
11	Star -up Time	ST			10	m Sec.	
12	Output Load	RL		50		Ω	Into VDD - 2V or Thevenin equivalent
13	Pulling Range	Fcntr	±100			ppm	Control Voltage Range : 0.3V ~ 3.0V
14	Control Voltage Range	VC	0.3	1.65	3.0		VC = 1.65 ± 1.35V
15	Vcon Center	VC	0.3	1.65	3.0		VC = 1.65 ± 1.35V
16	Linearity			5	10	%	

17	Input Impedance	Rvc		1.0		MΩ	Vc terminal to ground	
18	Modulation Bandwidth	Fc	10			KHz	measured at -3 dB	
19	Operating Temperature	T_opr	-40		85	°C		
20	Storage Temperature	T_stg	-55		150	°C		
21	Aging	F_aging	-2		2	ppm	first year	
22	RMS phase Jitter	Jrms		1.2		ps	12 KHz to 20 MHz integrated	
23	PhaseNoise(dBc/Hz) [typical] For reference only	10 Hz	100 Hz	1k Hz	10k Hz	100k Hz	1M Hz	
		-55	-85	-109	-116	-118	-139	
24	OE Control on Pad 2	If V _{DD} * 70% (min.) is applied : Output. Enabl						
		If V _{DD} * 30% (max.) is applied : Output Disable						

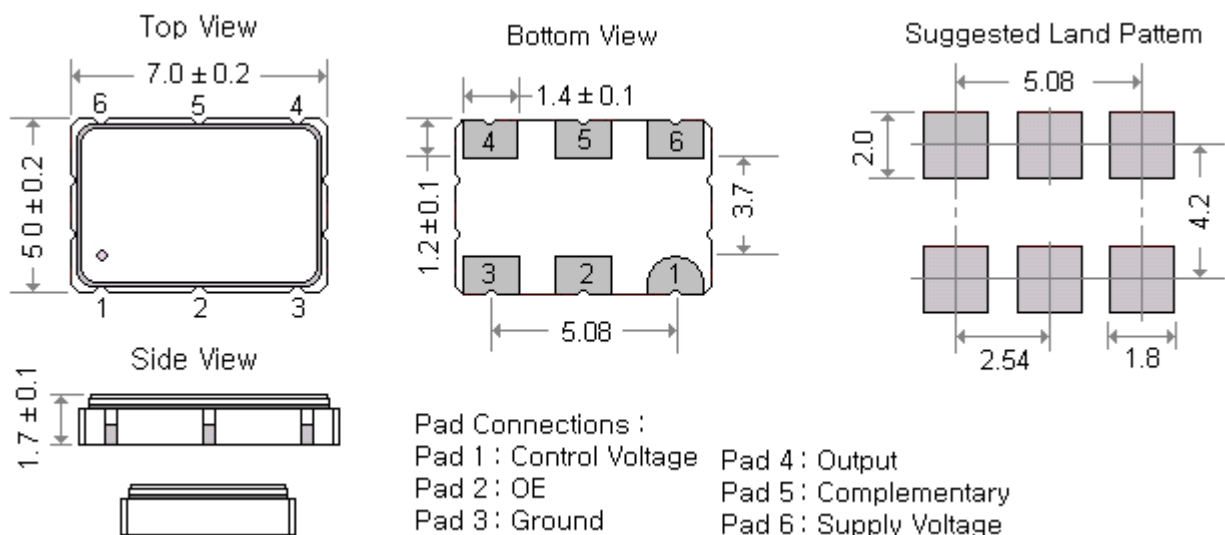


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

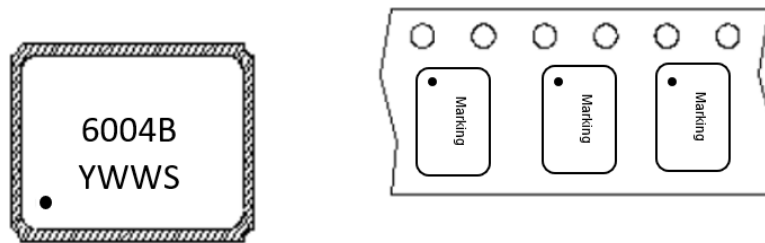
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Mechanical Dimensions: (Unit: mm)

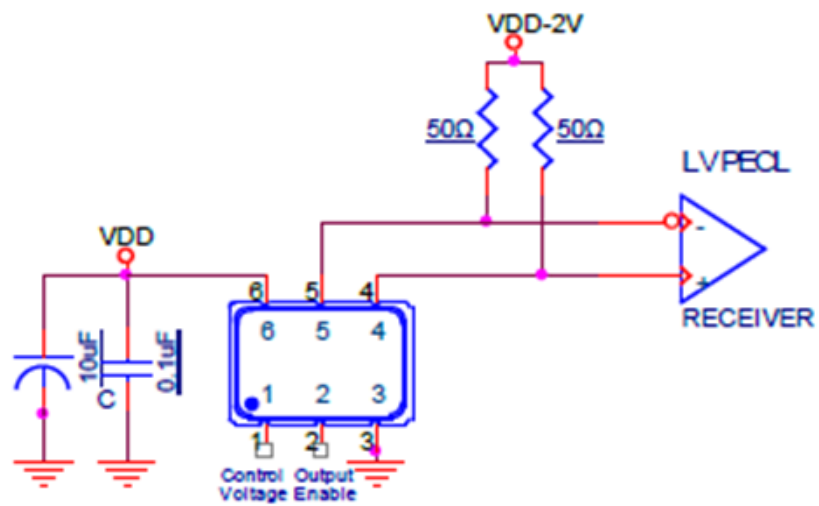


Marking:

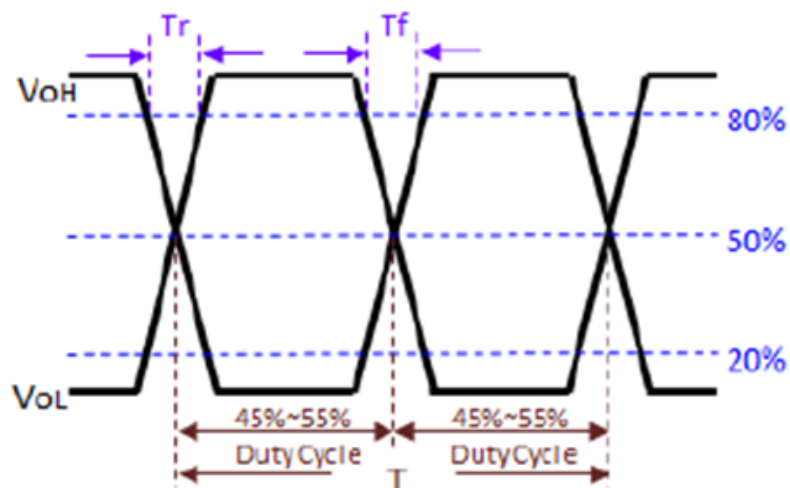
Y = Year, WW = Week, S = Shift



Test Circuit:



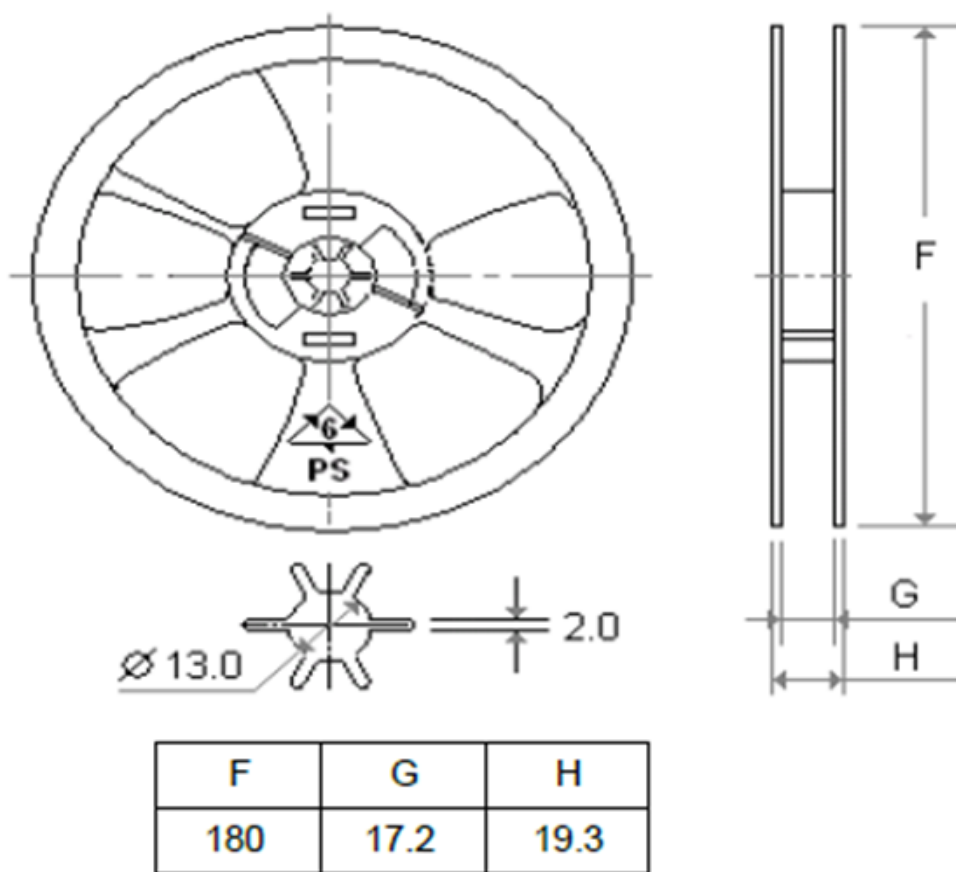
Output Waveform :



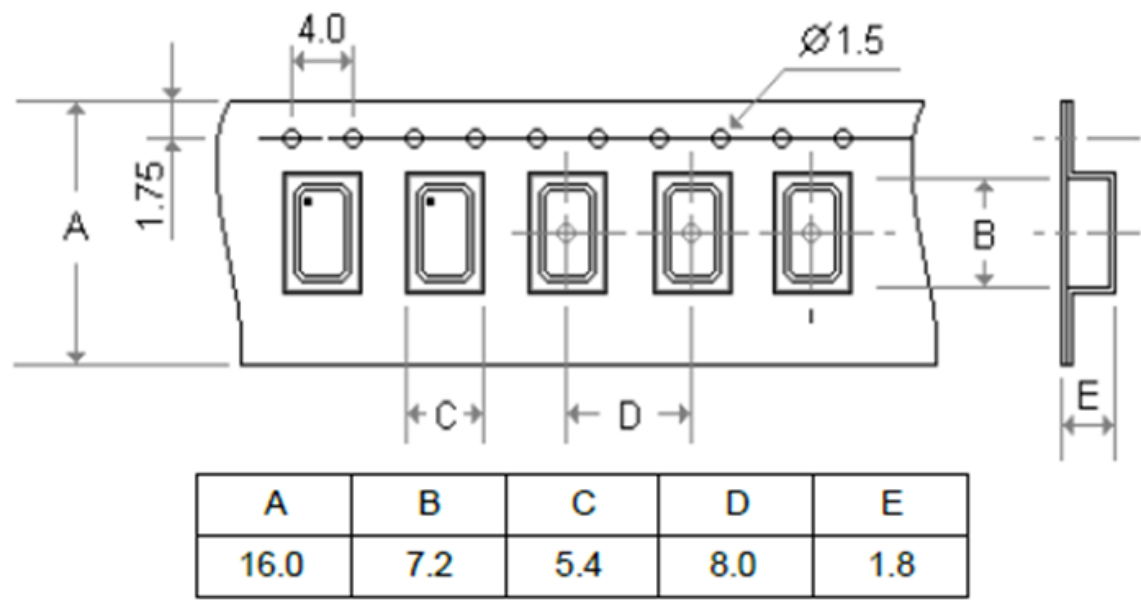
Tape & Reel:

- Reel dimension (unit: mm)

Reel Count: 7" = 1000

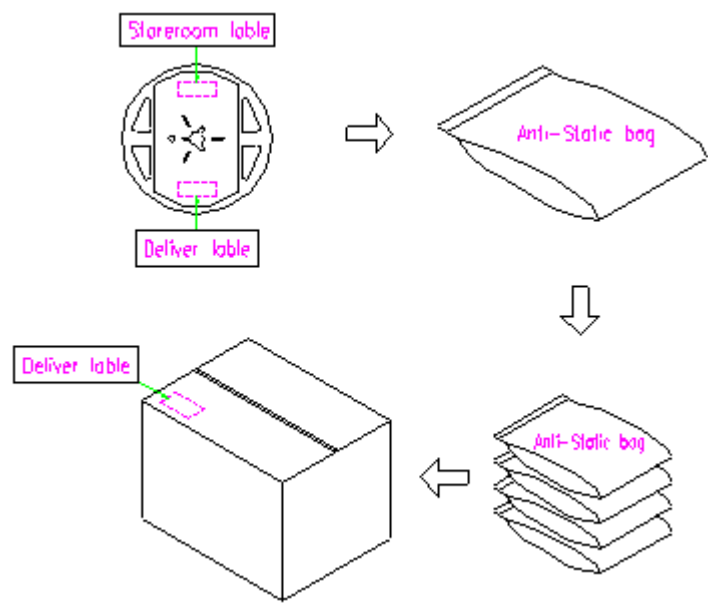


Tape Dimensions (mm):

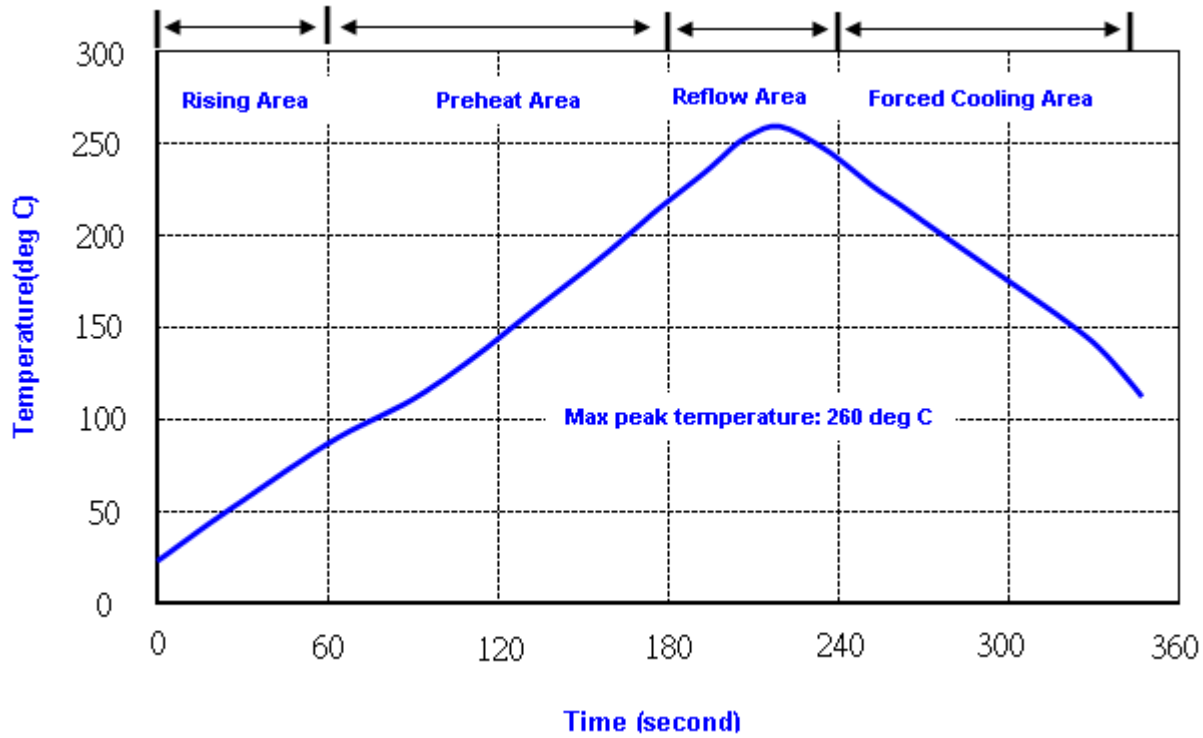


Packing Quantity/Packing:

1K pcs maximum per reel



Reflow Profile:



Note: 1. Max peak temperature: 260±5 deg C; Time: 10±2 sec
2. Temperature: 217±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