



Specification of differential output oscillator
 6EÄ *.#9! | f _9' ~?ô | -

RoHS Compliant

Revision Record				
Rev.	Revise page A0N¥	Revise contents A0 µ é	Rev. Date A0 O	Reviser A0 ê
B01	N/A	Initial released.	2021/2/24	Martin.Hu

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μ Electrical Specification +e"D ò

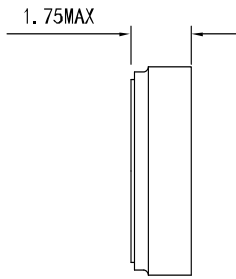
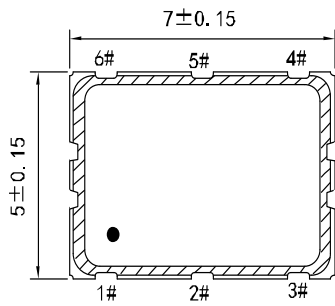
N0.	Item	Electrical Spec.	Notes
1	Holder Type 1>ð	SMD7050	
2	Nominal Frequency 70 NÁ)-	156.250000 MHz	
3	Frequency stability h\$YNÁ	±20ppm	at 25 ±2
4	Temperature Drift \$Y ÖNÁ	±30ppm	at -40 85
5	Operating voltage Œ+e »	3.3V	±5% max.
6	Output EÄ * Q ?	LVDS	
7	Output load EÄ *COE-	100Ω	Between OUT & OUTN,EN=Open
8	Current consumption #_6G+e#q	15 mA Typ.	30 mA max. V _{DD} =3.3V ĘEN=Open
9	Operating temperature Range Œ\$Y Ö93 \$	-40 85	
10	Storage Temperature Range ^ Ø\$Y Ö93 \$	-55 125	
11	Duty Cycle •0a"	45%-55%	
12	Rise / Fall Time : w/ ;L)"i &L\$	1 nS max.	9 R S S
13	High output voltage Q +e £	1.6V max.	DC Characteristics
14	Low output voltage ~+e £	0.9V min.	DC Characteristics
15	Start-up Time C\$ _ &L\$	10mS max.	To 90% of Final Amplitude
16	Phase noise -() š	-130dBc/Hz Typ.	at 1KHz offset.-125dBc/Hz Max.
17	RMS Phase Jitter w é i Æ Ø	0.1pSec Typ.	12KHz - 20MHz.0.3pSec Max.
18	Enable Voltage High (Logic 1) 7-Q +e £	70%Vdd min.	Output will be enable if EN is Logic 1 or open ; Output will be disable if EN is Logic 0.
19	Enable Voltage Low (Logic 0) 7- ~+e £	30%Vdd max.	EÄ * 7-EN _Q +e £ 1 F65 Ü0ª ÉNÁ).EÄ * xEÄ * 7-EN _ ~+e £ 0 É I NÁ).EÄ * Ä
20	Aging 61 F	±3ppm	1st. Year at 25

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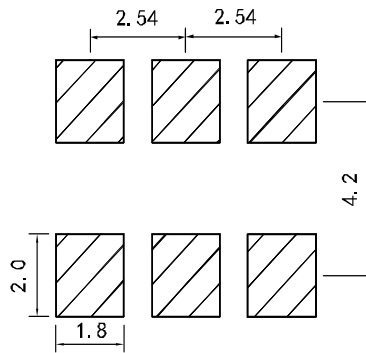
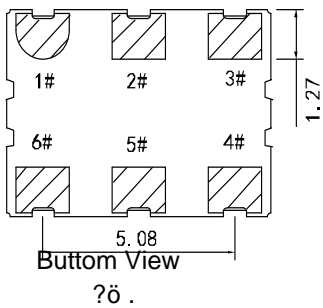
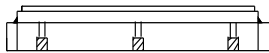
μ DIMENSIONS × ĩ j (

Units (...) Ömm(" 2£)



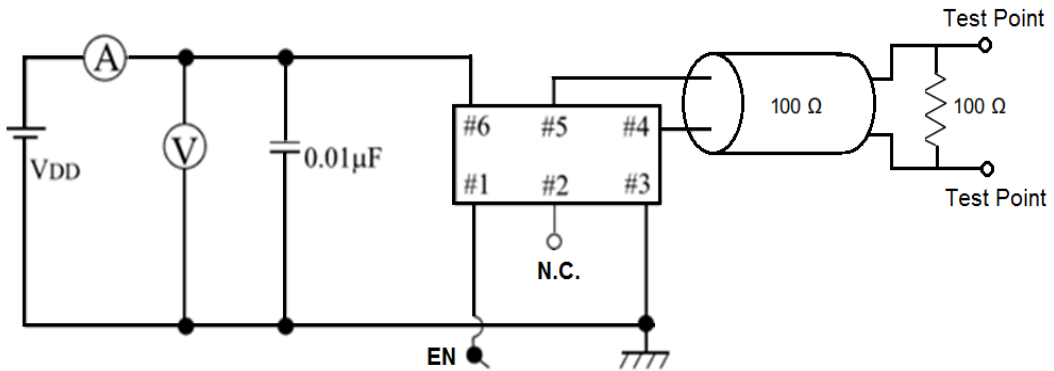
Pad Functions:

- 1. EN
- 2. NC
- 3. GND
- 4. OUT
- 5. OUTN
- 6. VDD



suggested solder pad layout

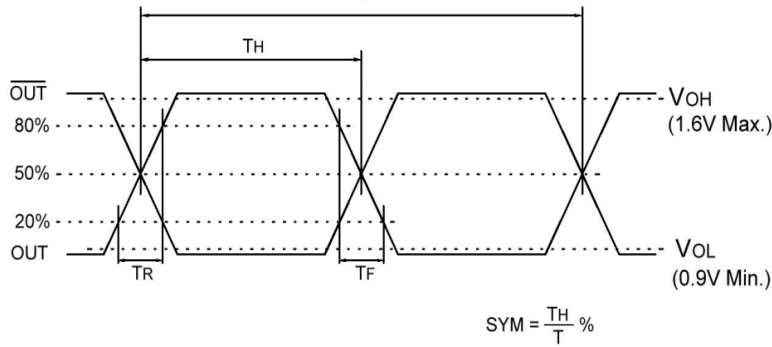
μ TESTING CIRCUIT#(B +eD



Notes: PIN 1 connected to Vdd or floating, the product is working properly;connected to GND,stops working.

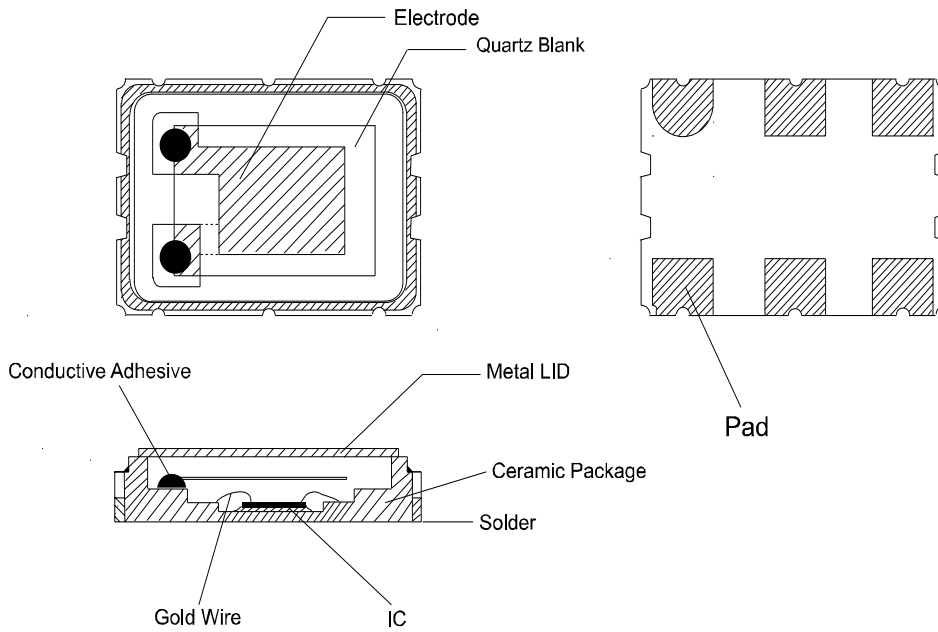
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μ WAVEFORM CONDITIONS EÄ *# ' ,

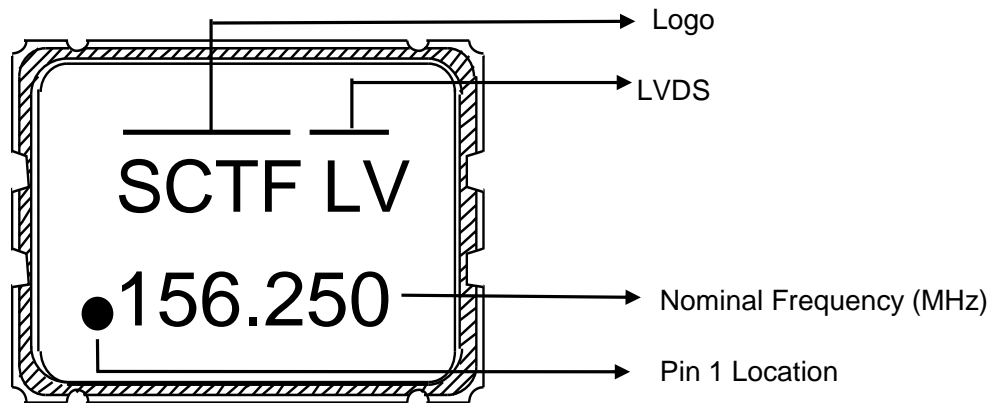


Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

μ Product Structure x ñ5 ' ,



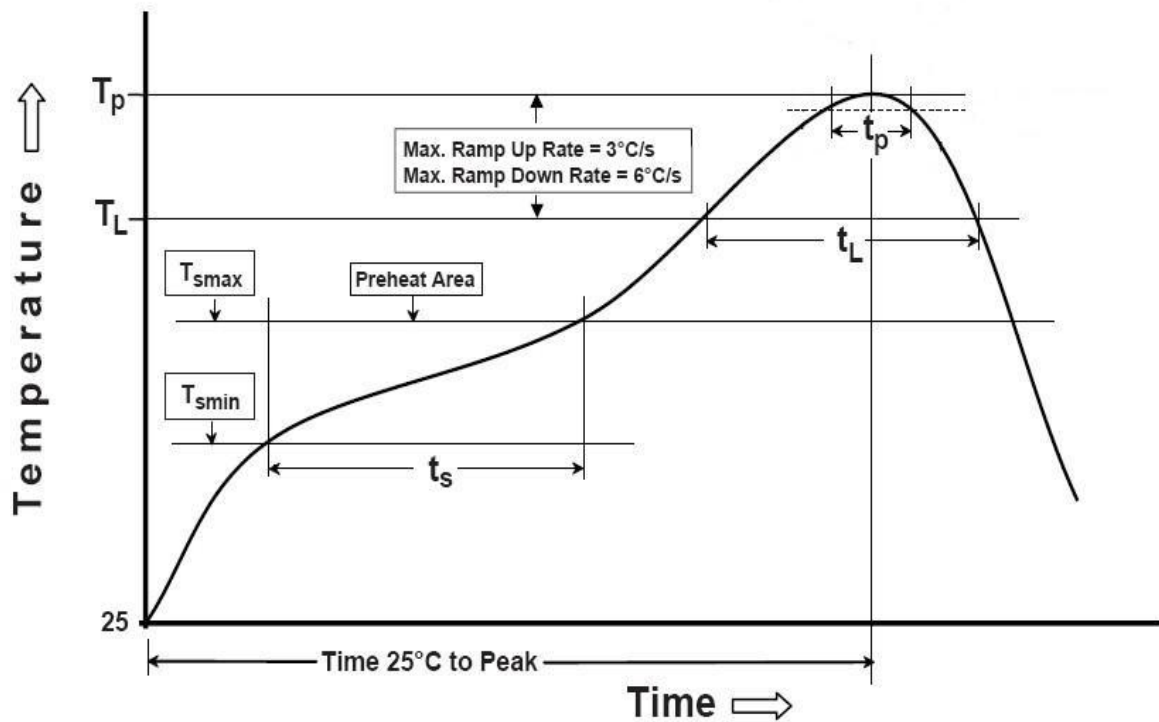
μ Marking ‡



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μ REFLOW PROFILES #q': ' &

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat/Soak		
½Temperature Min(Ts min)	100 ℃	150 ℃
½Temperature Max (Ts max)	150 ℃	200 ℃
½Time (Ts min to Ts max)	60-120 seconds	60-120 seconds
Ramp-up rate (TL to Tp)	3 ℃/second max.	3 ℃/second max.
Time maintained above		
½Liquidous temperature (TL)	183 ℃	217 ℃
½Time (tL) maintained above TL	60-150 seconds	60-150 seconds
Peak package body temperature (Tp)	235	260
Time within 5 °C of the specified classification temperature (Tp)	20 seconds	30 seconds
Ramp-down rate (Tp to TL)	6 ℃/second max.	6 ℃/second max.
Time 25 ℃ to peak temperature	6 minutes max.	8 minutes max.
Suggest reflow times	2 Times max.	



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RELIABILITY SPECIFICATION M•W 0

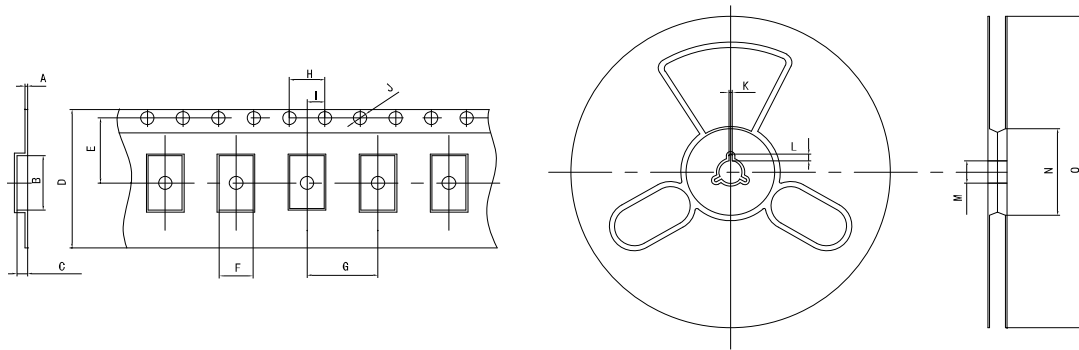
NO.	ITEM	CONDITIONS	BASIS OF VERDICT
1	Cü:m DROP	55cmQ 48 +aCü:m `3cm Ê X : ,3!Q High:55cm;Thickness:3cm;3 times.	FL 0 ±5ppm
2	Vibration	NÁ)· Frequency:10~57.7Hz: u Ö Amplitude:±0.75mm NÁ)·Frequency:57.7Hz~500Hz: ÐFO Ö u Ö acceleration rate:98m/s2 ~ O Cycle time:10-500-10Hz Ö15min _ Ø é A Direction:X, Y, Z _ Ø &L\$ Duration: !ÿ Z é A 2 ? & 2 h/direction.	FL 0 ±5ppm
3	Low Temperature Storage	\$Y Ö-40 ±2 ; &L\$:96 ? & Temp:-40 ±2 ;Times:96h	FL 0 ±5ppm
4	High Temperature Storage	\$Y Ö125 ±2 ; &L\$:96 ? & Temp:125 ±2 ;Times:96h	FL 0 ±5ppm
5	High Temp&Homidit	\$Y Ö85 ±2 ; Ö85%±5% ; &L\$:1000 ? & Temp:80 ±2 ;Humidity:85%±5%;Times:1000h	FL 0 ±5ppm
6	Thermal Shock	-40 ±2 Ä 30min Ä 85 ±2 Ä 30min Ä ; Ü)B100!Q -40 ±2 Ä 30min Ä 85 ±2 Ä 30min Ä ;For 100 cycles	FL 0 ±5ppm
7	Reflow	150 ±5 1 120s > w ` 265 ±5 1 10s È w\$Y ¼ \$Y &L\$? ¼200s È h\$Y n5ž1 2h >#{ È Keep 150 ±5 120s and then rose to 265 ±5 for 10s, warming and holding time is less than the 200s, placed at room temperature 1 ~ 2h after test	FL 0 ±5ppm
8	Salt Spray	- M.#f Ö:5%;\$Y Ö35 ; &L\$:24 ? & Salt density:5%;Temp:35 ;Times:24h	- #{ > n7€<°)àB' Visual no significant corrosion.
9	61 F Aging	\$Y Ö85 ; &L\$:30 Y Temp:85 ;Times:30days	FL 0 ±5ppm
10	Leakage Test	+X"VBa ö#{Aî 7 Ä Measured by the helium leak detector.	%?"D ? ¼ [°Pa <1.0x10 ⁻⁹ Pa m ³ /s.
11	Soldering Test	X245 ±5 ,KQ -]#"\$= 3±0.50 Ä Dipping in solder bath at 245deg.C ±5deg.C for 3±0.5 sec.	#"KQ)· W ¾ Soldering tin rate greater than 90%

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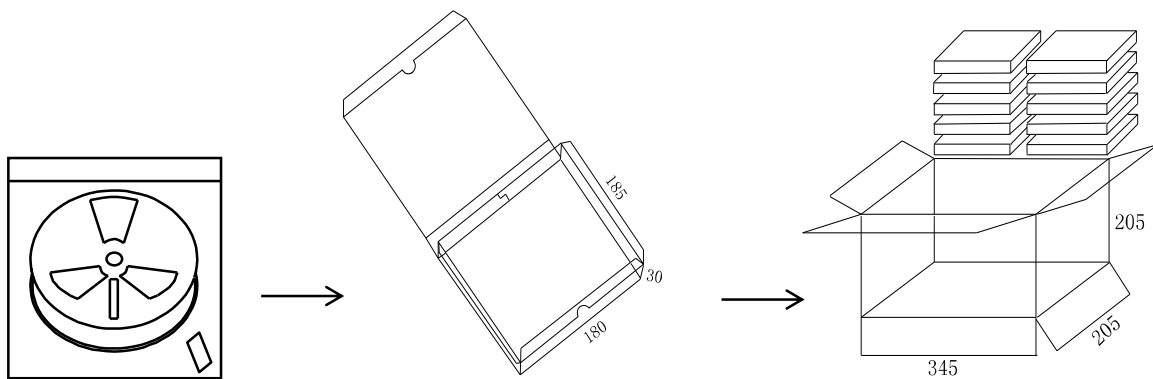
μ Taping Specifications 5F V?δ I

8 1,7 ...} PP " 2E



TEYE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
h 60'	0.3	7.5	2.0	16.0	7.5	5.5	8.0	4.0	2.0	1.5	2.0	4.0	13.0	60.0	180.0

μ Packaging specifications 5>δ?δ I



8 1>» % D J
Ež Ù
1000pcs = 1 Reel

μ 5>δ , Q V L G H S D F N D J H F 5>δ 2 X W V L G H 3 D F N D J H
Ež Ù -
5 H H O Ù
- 1á
10 box=1 carton

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