

- LVDS Output Crystal Oscillator -

TYPE : CL50V**-1 / CL504**-1

RoHS

- LVDS output SPXO (16.0MHz to 175MHz)
- Excellent performance / Low jitter and high stability vs temperature
- High speed switching (Tr/Tf=0.2ns Typ.) , low consumption
- RoHS compliant

Supply Voltage	+2.5Vdd or +3.3Vdd
Output Level	LVDS
Dimension	5.0*3.2*1.4mm



- Electrical Specifications -

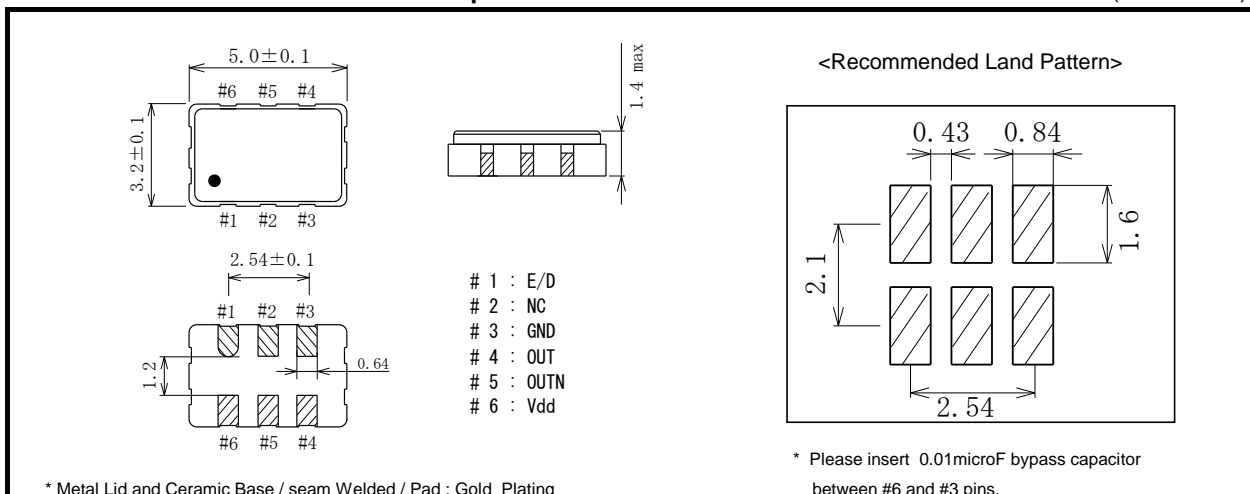
* +3.3Vdd = < CL504**-1 > +2.5Vdd = < CL50V**-1 >

Item	Condition	MIN	TYP	MAX	UNIT
Frequency Range (Fo)		16.0	-	175	MHz
Supply Voltage	Vdd=+3.3V	+3.135	-	+3.465	V
	Vdd=+2.5V	+2.375	-	+2.625	V
Total Frequency Accuracy (Including accuracy, supply voltage change, 1st year aging)	(G) option	-20	-	+20	PPM
	(A) option	-25	-	+25	PPM
	(B) option	-50	-	+50	PPM
	(C) option	-100	-	+100	PPM
Operating temperature	(S) option	0	-	+70	deg.c
	(A) option	-20	-	+70	deg.c
	(B) option	-40	-	+85	deg.c
	(C) option	-10	-	+70	deg.c
Storage temperature		-50	-	+125	deg.c
Output Level	VOH	-	1.43	1.6	V
	VOL	0.9	1.10	-	V
Rise Time	20% to 80%	-	0.2	0.4	ns
Fall Time	80% to 20%	-	0.2	0.4	ns
Duty	at output cross point	45	-	55	%
Differential Output Level		247	330	454	mV
Offset Level	RL =100Ohm / Fo=100MHz	1.125	1.25	1.375	V
Offset Level Accuracy	RL =100Ohm / Fo=100MHz	-	-	50	mV
Current Consumption	Vdd = +3.3V	-	-	38.5	mA
	Vdd = +2.5V	-	-	34.0	mA
Load		100			Ohm
RMS jitter *1 (Offset:12kHz to 20MHz)	Vdd = +3.3V, Fo=156.25MHz,	-	0.08	-	ps
	Vdd = +2.5V, Fo=156.25MHz,	-	0.095	-	
Start Up Time		-	-	10	ms
E/D function	#1pin = Hi or Open : Output Enable / Low : Output Disable				

1*) Measured with E5052B signal source analyzer (Agilent technology).
(Typical RMS Jitter value is depending on Output Frequency).

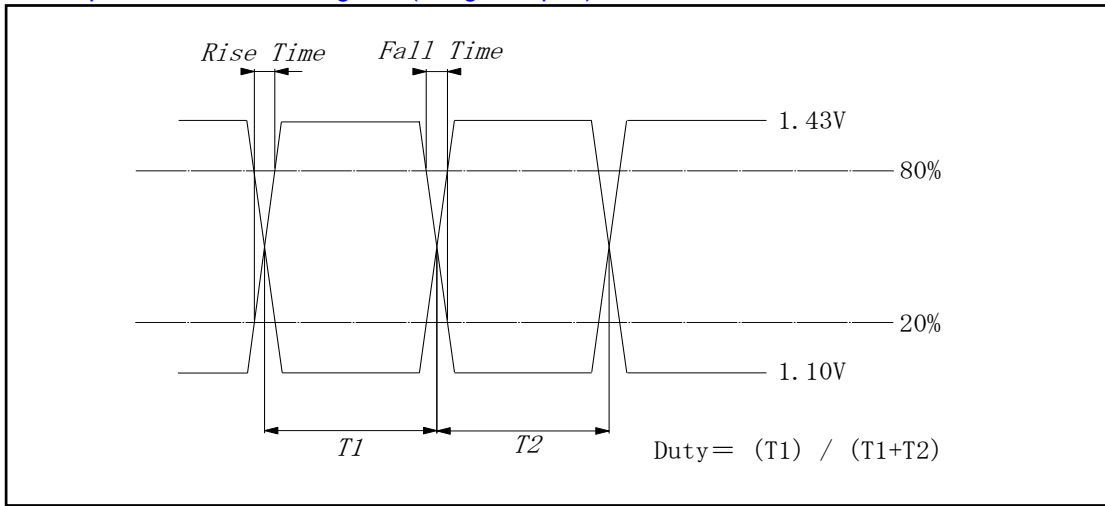
< Dimension and recommended land pattern >

(Unit in mm)

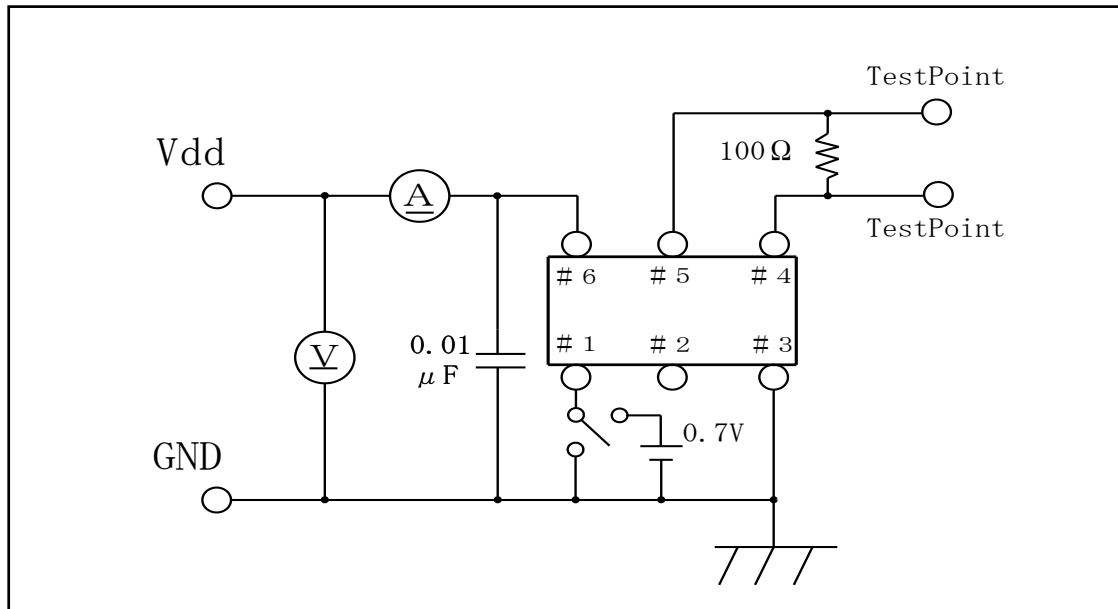


* Metal Lid and Ceramic Base / seam Welded / Pad : Gold Plating

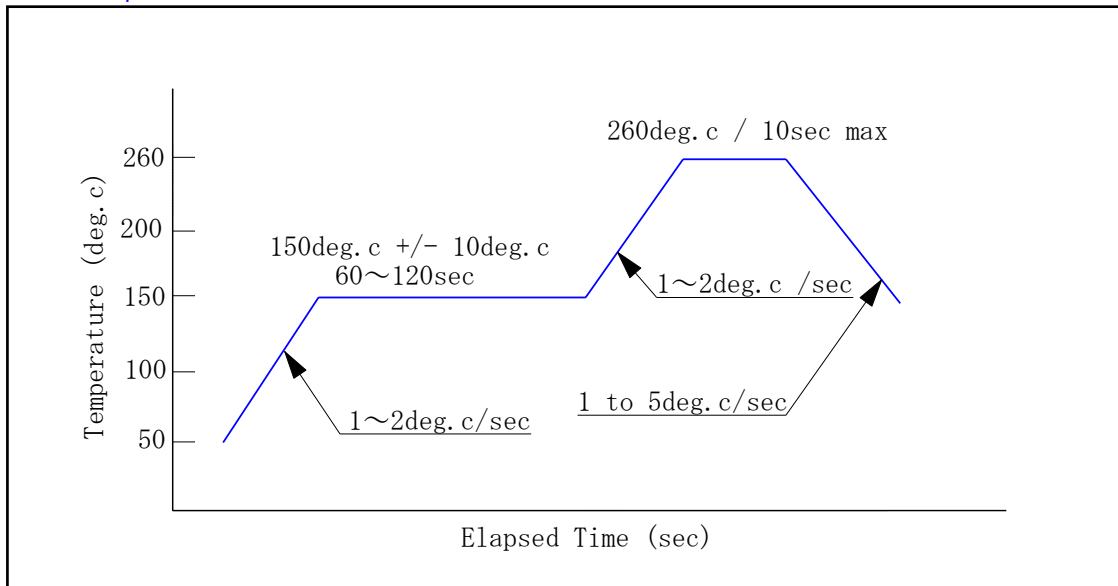
● Output Wave Form Diagram (Single output)



● Test circuits

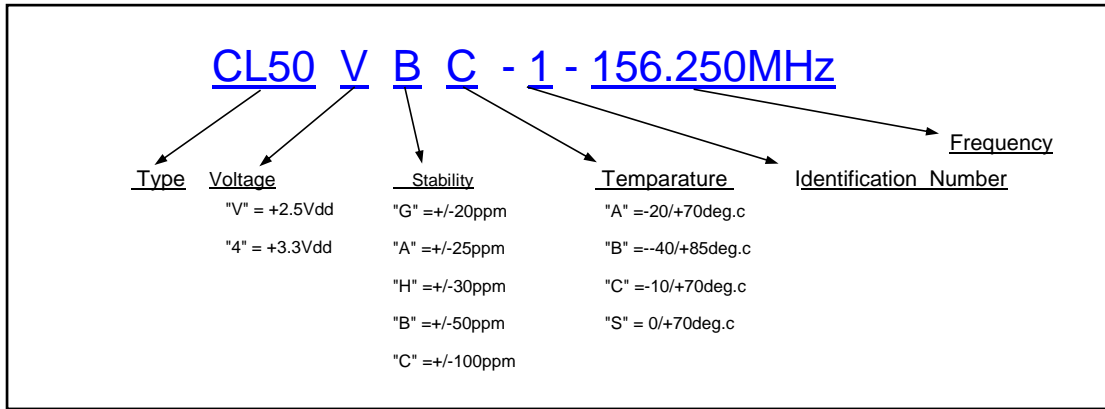


● Reflow profile



- * The reflow process can be allowed until 2 times.
- * In case of manual soldering ; using soldering iron at +360deg.c +/-20deg.c , within 3sec (per each 1pad)
- * This product includes CMOS device, then please handle it with protected process against ESD.

● How to define Model Number



TamaDevice
Solution & Development

(URL) <http://www.tamadevice.co.jp>

(E-MAIL) info@tamadevice.co.jp

(TEL) +81-44-945-8028

(FAX) +81-44-945-8486

Copyright© Tamadevice.Co.,Ltd

2016.09.02 Rev.A2