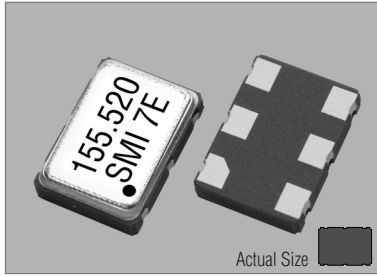


# Low Voltage Positive Emitter Coupled Logic Oscillators

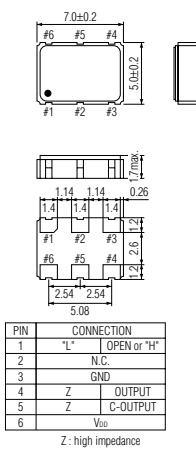
57SMO (+2.5V or +3.3V FIXED LVPECL MODELS)

STANDARD SMD CLOCK OSCILLATORS

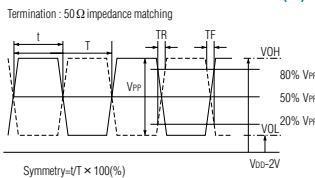
57SMO



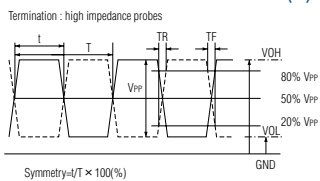
57SMO



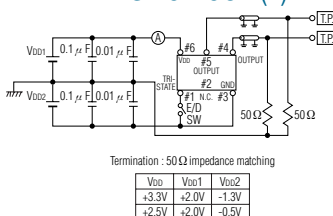
## OUTPUT WAVEFORM(1)



## OUTPUT WAVEFORM(2)



## TEST CIRCUIT(1)



## STANDARD SPECIFICATIONS

LVPECL

Item	Specifications
Generic part number	57SMO*1
Frequency range	40.000 MHz to 300.000 MHz
Frequency stability (0°C to +70°C)	57SMO(A): ±100 ppm 57SMO(B): ±50 ppm 57SMO(C): ±30 ppm 57SMO(D): ±25 ppm
over all conditions	
Operating Conditions	
Operating temperature	0°C to +70°C(Standard) -40°C to +85°C (W)
Input voltage (V <sub>DD</sub> )	+2.5V DC ±5%      +3.3V DC ±5%
Stand-by control voltage (Pin#1)	V <sub>IH</sub> : 70%V <sub>DD</sub> min. V <sub>IL</sub> : 30%V <sub>DD</sub> max.**2
Absolute Max. Ratings	
Supply voltage	-0.5V to +5.0V DC
Storage temperature	-50°C to +125°C
Input current (Pin #1 = Open or V <sub>IH</sub> )	90 mA max.
Stand-by current**2 (Pin #1 = V <sub>IL</sub> )	30 μA max.
Output (0°C to +70°C)	
Symmetry (at crossing point)	40% to 60%      45% to 55%
Rise and fall times	1 ns max. (20% to 80% of amplitude)
"0" level	V <sub>OL</sub> : +1.195V max.      V <sub>OL</sub> : +1.745V max.
"1" level	V <sub>OH</sub> : +1.415V min.      V <sub>OH</sub> : +2.215V min.
Load	50 Ω into V <sub>DD</sub> -2V
Disable delay time	200 ns max.
Enable delay time	10 ms max.
Startup time	10 ms max.
RMS jitter (12 kHz to 20 MHz band)	1 ps max.
Aging	±5 ppm max. at +25°C ±3°C for first year
Reflow condition	+250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)

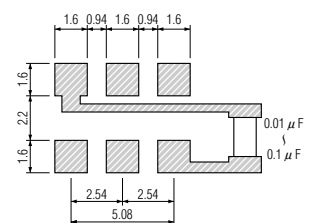
(※1) Final exact part number to be determined with frequency, frequency stability, operating temperature and input voltage.  
e.g. 57SMO(3.3VB)W 155.520 MHz.

(※2) Internal crystal oscillation to be halted (Pin #1=V<sub>IL</sub>).

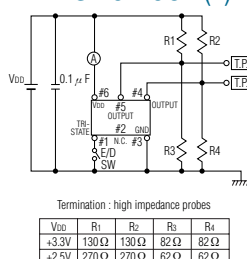
## PACKAGE DATA

Item	Package	57SMO
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)

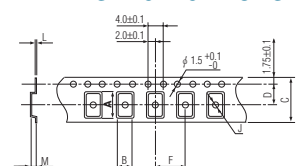
## SOLDERING PATTERN



## TEST CIRCUIT(2)



## TAPE SPECIFICATIONS



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
7.5	5.5	16.0	7.5	8.0	2.0	0.3	2.2	245	1000pcs

Note: R<sub>3</sub> & R<sub>4</sub> to change for the use of low impedance probes