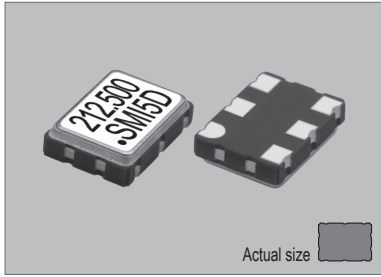
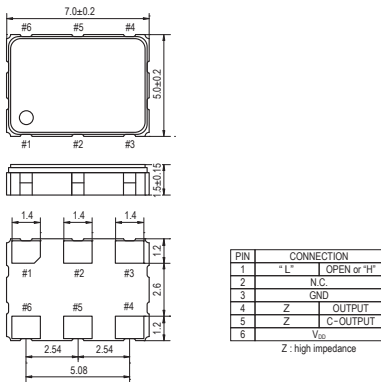


77SMO

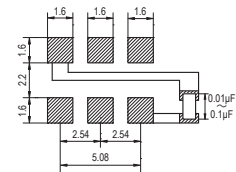


Actual size
0.175 gm (wt.)

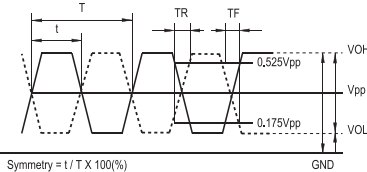
77SMO



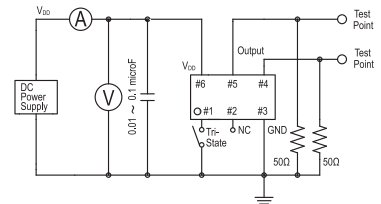
SOLDERING PATTERN



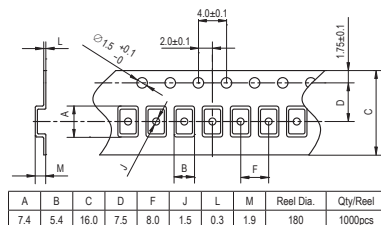
OUTPUT WAVEFORM



TEST CIRCUIT



TAPE SPECIFICATIONS



STANDARD SPECIFICATIONS

● HCSL OUTPUT
● PACKAGE SIZE 7.0x5.0 mm

Item	Specifications	
General part number	77SMO* ¹	
Frequency range	13.5000 MHz to 220.000 MHz	
Frequency stability (over all conditions)	77SMO(A) : ±100 ppm over -20°C to +70°C	
	77SMO(B) : ±50 ppm over -20°C to +70°C	
	77SMO(C) : ±30 ppm over -20°C to +70°C	
	77SMO(D) : ±25 ppm over -20°C to +70°C	
	77SMO(E) : ±20 ppm over -20°C to +70°C	
Operating Conditions	77SMO(AW) : ±100 ppm over -40°C to +85°C	
	77SMO(BW) : ±50 ppm over -40°C to +85°C	
	77SMO(CW) : ±30 ppm over -40°C to +85°C	
	77SMO(DW) : ±25 ppm over -40°C to +85°C	
	77SMO(EW) : ±25 ppm over -40°C to +85°C	
Absolute Max. Ratings	Operating temperature	-20°C to +70°C (Standard) -40°C to +85°C (W = Option)
	Supply voltage (V _{DD})	+2.5V DC ±5% +3.3V DC ±5%
	Stand-by control voltage (Pin#1)	V _H : 70% V _{DD} min. V _L : 30% V _{DD} max.* ²
Input current (Pin#1 = Open or V _H)	Supply voltage	-0.3V to +4.0V DC
	Storage temperature	-50°C to +125°C
Stand-by current* ² (Pin#1 = V _L)	60 mA max.	
Output (-40°C to +85°C)	Symmetry	45% to 55% at crossing point
	Rise and fall times (+0.175 V to +0.525 V DC level)	0.5 ns max.
	"0" Level	V _{OL} : -150mV to +150mV
	"1" Level	V _{OH} : +580mV to +850mV
	Load	50 Ω
Start-up time	15 μA max.	
SSB phase noise (at V _{DD} = +3.3V & 155.520 MHz)	10 ms max.	
RMS jitter (12 kHz to 20.000 MHz band) (at V _{DD} = +3.3V & 155.520 MHz)	-133 dBc / Hz, Typical at 1 kHz offset	
Disable delay time	500 fs max. (85 fs, Typical)	
Enable delay time	200 ns max.	
Differential output voltage	2 ms max.	
Agging	+0.60Vp-p min.	+0.65Vp-p min.
Reflow condition	±5 ppm max. at +25°C ±3°C for first year	
	+250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)	

(*¹) Final part number to be assigned with package type, input voltage, frequency stability, operating temperature and frequency. e.g. 77SMO(3.3VBW) 100.000MHz
(*²) Internal crystal oscillation to be halted (Pin#1 = V_L)

PACKAGE DATA

Item	Package	77SMO
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)

XTAL

CLK OSC

VCXO

TCXO

OCXO

MCF