

Miniature, Ceramic, Surface Mount, Tristate HCMOS Oscillators

SM996 • SM997



FEATURES

- Ceramic/seam sealed package
- TTL/CMOS compatible
- Reflow solderable at 260°C for 10 seconds
- Tristate enable/disable
- Can be used as standard HCMOS oscillator by not connecting Pin #1
- 16mm tape & reel: 500pcs/reel Std or Bulk [<500pcs]

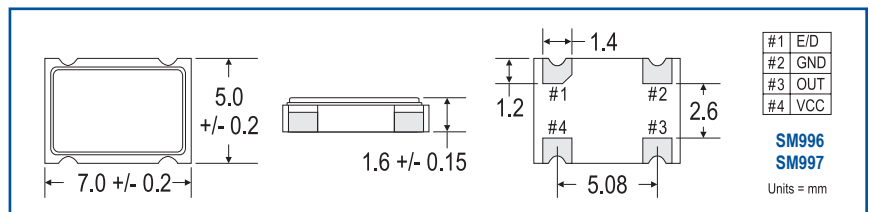
APPLICATIONS

- Wireless RF
- PCMCIA
- Cameras
- Disk Drives
- PDAs

SPECIFICATIONS

	SM996	SM997
Frequency Range	1.5 ~ 100.0 MHz	1.5 ~ 125.0 MHz
Supply Voltage	5.0 VDC ± 0.5 V	3.3 VDC ± 0.3 V
Symmetry	60/40% at 1/2 Vcc max 55/45% available	60/40% at 1/4 Vcc max 55/45% available
Input Current (MHz: mA max)	1.5 ~ 20.0 : 20 20.1 ~ 70.0 : 40 70.1 ~ 80.0 : 60	1.6 ~ 20.0 : 10 20.1 ~ 70.0 : 20 70.1 ~ 90.0 : 35 90.1 ~ 120.0 : 45
Rise & Fall Time (MHz: nS max)	1.5 ~ 25.0 : 10 25.1 ~ 70.0 : 8	1.5 ~ 25.0 : 10 25.1 ~ 70.0 : 8 70.0 ~ 120.0 : 5
Load Capacitance	15 pF standard (50 pF available)	
Start up Time	5.0 mS max	
Frequency Stability	± 100ppm standard (± 25ppm available)	
Oper Temp Range	0°C to 70°C standard (-40°C to 85°C available)	
Logic "0" Level	10% of Vcc max	
Logic "1" Level	80% of Vcc min	
E/D Phase Delay	100 nS max	

Monitor has a proven track record as a pioneer manufacturer in the frequency control market. If our extensive selection of standard and engineered crystals and oscillators does not meet your spec, we will work with you towards a customized solution.

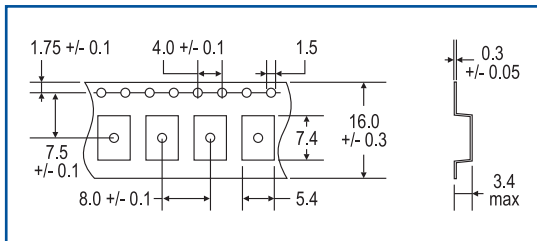


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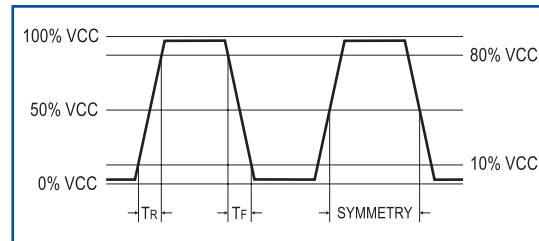
ENVIRONMENTAL PERFORMANCE SPECIFICATIONS

Operating Temp Range	0°C to 70°C standard (-40°C to 85°C available)
Storage Temp Range	-55°C to 125°C
Vibration	MIL-STD-202F Method 204, 35G, 50 to 2000 Hz
Shock	MIL-STD-202F Method 213B Test Cond E, 1000G, 1/2 Sine Wave
Humidity	85% RH, 85°C, 48 Hours
Hermetic Seal	Leak Rate 2×10^{-8} ATM-cm ³ /sec max
Solderability	MIL-STD-202F Method 208E
MIL-0-55310	Exceeds environmental and electrical specifications of equivalent MIL-0-55310
Packaging	16mm Tape & Reel (500pcs/reel standard, or Bulk <500pcs)

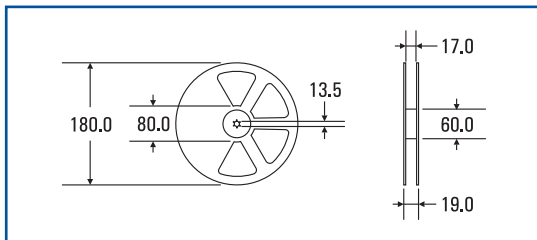


TAPE DIMENSIONS

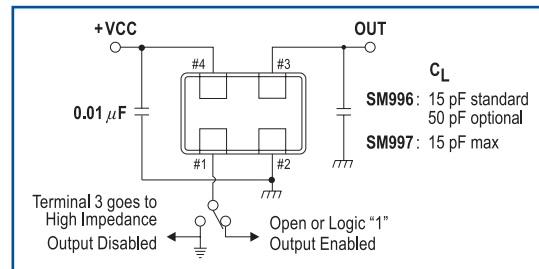
Units : mm



TYPICAL OUTPUT WAVEFORM



REEL DIMENSIONS (500pcs/reel std)



TEST CIRCUIT

PART NUMBERING KEY

Sample Part Numbers

SM99621B2E @ 19.44 MHz =

SM99722E2A @ 22.0 MHz =

SERIES	SYMMETRY	FREQUENCY STABILITY	TEMP RANGE	PACKAGING	FREQUENCY
SM996 (5.0V) SM997 (3.3V)	21 = 55/45% 22 = 60/40%	B = 100 ppm* C = 50 ppm D = 30 ppm E = 25 ppm	2 = 0°C ~ 70°C 3 = -20°C ~ 70°C 5 = -40°C ~ 85°C 7 = -10°C ~ 70°C*	A = Bulk (<500pcs) E = Tape & Reel* (500pcs/reel std)	
SM996	21	B	2	E	19.44
SM997	22	E	2	A	22.0

* Standard

Call plant for additional options. Use full descriptive part number when ordering. Parts will be marked with series and frequency only.

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