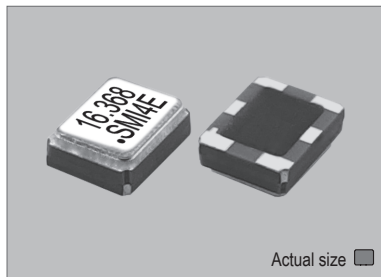
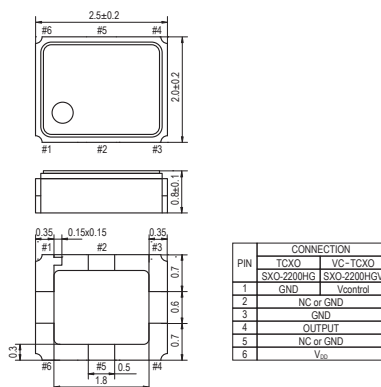


SXO-2200HG

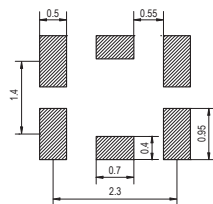


0.014 gm (wt.)

SXO-2200HG



SOLDERING PATTERN

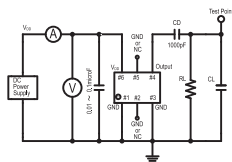


OUTPUT WAVEFORM



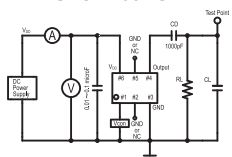
TEST CIRCUIT

SXO-2200HG



CD : DC-Cut capacitance
RL : 10Kohm $\pm$ 10%
CL : 10pF $\pm$ 10% including fixture and probe capacitance

SXO-2200HGV



CD : DC-Cut capacitance
RL : 10Kohm $\pm$ 10%
CL : 10pF $\pm$ 10% including fixture and probe capacitance

STANDARD SPECIFICATIONS

Item		Specifications							
General part number		SXO-2200HG* ¹				SXO-2200HGV* ¹			
Frequency range		13.000 MHz to 52.000 MHz							
Initial frequency tolerance at +25°C ±2°C		±1.5 ppm max.* ²				±1.5 ppm max. (V _{CON} = 1/2 V _{DD})* ²			
TCXO or VC-TCXO		TCXO				VC-TCXO			
Frequency Stability	Temperature range	±0.5 ppm max. over -30°C to +85°C (referred to +25°C)* ³							
	Input voltage change	±0.2 ppm max. at V _{DD} ±5% DC							
	Output load change	±0.2 ppm max. at 10 kΩ ±10% with10 pF ±10%							
	Aging	±1 ppm max. per year at +25°C ±3°C							
Operating Conditions	Operating temperature	-30°C to +85°C (Standard) -40°C to +85°C (W = Option, frequency dependent)							
	Supply voltage (V _{DD})	D = +1.8V, F = +2.5V, H = +2.8V, J = +3.0V, K = +3.3V DC ±5%							
	Control voltage (Vcon)	n.a.				+0.9V ±0.8V (V _{DD} = +1.8V) 1/2 V _{DD} ±1V (V _{DD} = +2.5V to +3.3V)			
Absolute Max. Ratings	Supply voltage	-0.6V to +4.6V DC							
	Vcontrol voltage (Vcon)	n.a.				-0.6V to V _{DD} +0.6V DC			
	Storage temperature	-40°C to +85°C							
Input current		1.5 mA max. (13.000 MHz to 30.000 MHz) 1.7 mA max. (30.000 MHz to 40.000 MHz) 2 mA max. (40.000 MHz to 52.000 MHz)							
Output (-40°C to +85°C)	Level	0.8 Vp-p min.							
	Load	10 kΩ // 10 pF							
	Waveform	Clipped sine wave (DC-coupling)							
Frequency Adjustment	Voltage control (Vcon)	n.a.				±8 ppm to ±13 ppm (V _{DD} = +1.8V)			
						±9 ppm to ±15 ppm (V _{DD} = +2.5V to +3.3V)			
Frequency slope		n.a.				Positive			
Harmonic distortion		-5 dBc max.							
Start-up time		2 ms max.							
SSB phase noise (26.000 MHz)		-135 dBc / Hz, Typical at 1 kHz offset							
Short-term frequency stability		±1 ppb max. (Allan variance Tau = 0.1 sec.)							
IR reflow resistance		±1 ppm max. (referred to frequency before reflow)							
Reflow condition		+250°C ±10°C for 10 seconds +170°C ±10°C for 1 to 2 minutes (preheating)							
Standard frequencies (MHz)		16.368, 16.369, 19.200, 26.000, 27.456, 33.600, 38.400, 52.000							
Optional Operating Temperature* ⁴	Low limit / Symbol	-10°C / g	-15°C / h	-20°C / i	-25°C / j	-30°C / k	-35°C / l	-40°C / m	
	High limit / Symbol	+55°C / ff	+60°C / gg	+65°C / hh	+70°C / ii	+75°C / jj	+80°C / kk	+85°C / ll	

(*¹) Final part number to be assigned with package type, TCXO or VC-TCXO, input voltage, operating temperature and frequency.

e.g. SXO-2200HG-H-38.4MHz

(*) Referred to nominal frequency before reflow soldering.

(*³) At $V_{con} = 1/2 V_{DD}$ DC for SXO-2200HGV.

(*4) Select "low limit" and "high limit" for new operating temperature combination from the lists.

PACKAGE DATA

Item \ Package	SXO-2200HG
Lid	Metal
Base	Ceramic
Sealing	Seam
Terminal	Tungsten (metalized)
Terminal plating	Gold / Nickel (surface) / (under)
RoHS	Compliant (Pb-free)

TAPE SPECIFICATIONS

