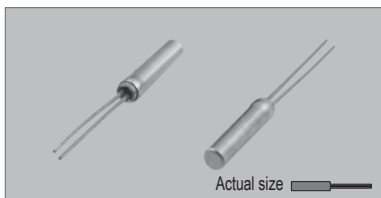
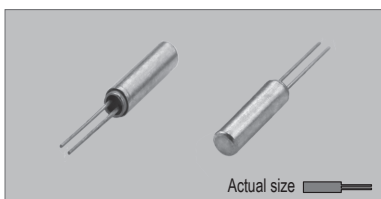


1.2 x 4.7 mm



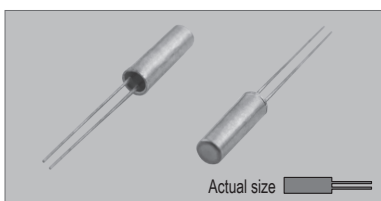
0.015 gm (wt.)

1.4 x 5.0 mm



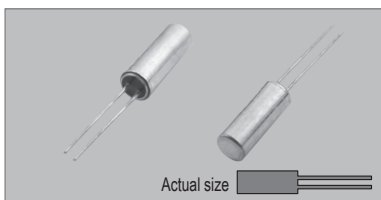
0.026 gm (wt.)

2.0 x 6.0 mm



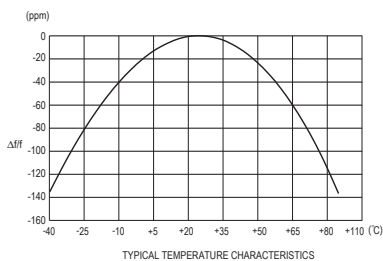
0.05 gm (wt.)

3.0 x 8.0 mm



0.143 gm (wt.)

XY-CUT



STANDARD SPECIFICATIONS

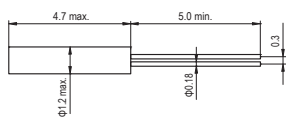
Item	Symbol	Specifications			
Part number	P/N	1247STF327	145STF327	26STF327	38STF327
Package Type		1.2x4.7 mm	1.4x5 mm	2x6 mm	3x8 mm
Nominal frequency	F	32.768 kHz			
Frequency tolerance (at +25°C)	$\Delta f/F$	AA : ± 10 ppm A : ± 15 ppm B : ± 20 ppm (Standard) C : ± 30 ppm			
Load capacitance	CL	8.0 pF, Typical		12.5 pF, Typical	
Equivalent series resistance	ESR	50k Ω max.	40k Ω max.	35k Ω max.	
Drive level	P	1 μ W max.			
Turnover temperature	Tt	+25°C to $\pm 5^\circ$ C			
Temperature coefficient (Typical)	β	-0.035 ppm / °C ²		-0.034 ppm / °C ²	
Quality factor (Typical)	Q	60000	85000	70000	85000
Shunt capacitance (Typical)	C0	0.8 pF	1.0 pF	1.3 pF	1.6 pF
Motional capacitance (Typical)	C1	0.002 pF	0.0025 pF	0.003 pF	0.0035 pF
Capacitance ratio (Typical)	γ	400	400	450	460
Aging (for first year)	$\Delta f/F$	± 3 ppm max. at +25°C $\pm 3^\circ$ C			
Insulation resistance	Ri	500 M Ω min. at 100V DC ± 15 V			
Cut		XY-Cut			
Operating temperature range	To	-20°C to +60°C		-20°C to +70°C	
Storage temperature range	Ts	-30°C to +70°C		-40°C to +85°C	
Shock resistance* 1	$\Delta f/F$	± 5 ppm max.			
Vibration resistance	$\Delta f/F$	± 5 ppm max.			

(*) Shock is defined "three drops from a height of 75cm onto hardwood."

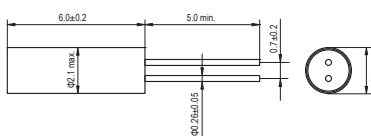
PACKAGE DATA

Item	Package	1247STF327	145STF327	26STF327	38STF327
Cover		Metal	Metal	Metal	Metal
Base		Glass	Glass	Glass	Glass
Sealing		Press-fit	Press-fit	Press-fit	Press-fit
Terminal lead		Alloy (FeNiCo)	Alloy (FeNiCo)	Alloy (FeNiCo)	Alloy (FeNiCo)
Terminal plating		SnCu	SnCu	SnCu	SnCu
RoHS		Compliant (Pb-free)	Compliant (Pb-free)	Compliant (Pb-free)	Compliant (Pb-free)

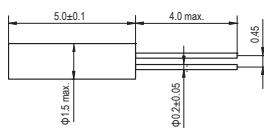
1.2x4.7mm



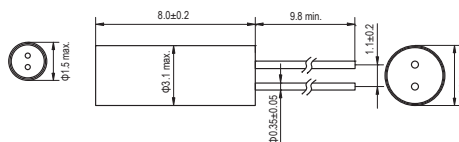
2.0x6.0 mm



1.4x5.0 mm



3.0x8.0 mm



XTAL

CLK OSC

VCXO

TCXO

OCXO

MCF