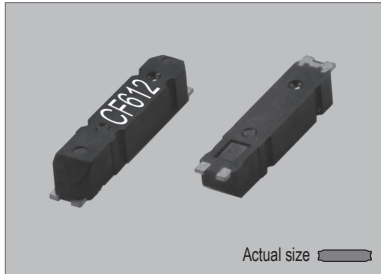
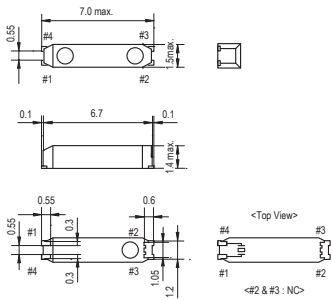


124SMX

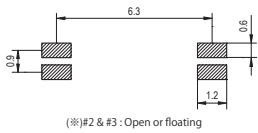


0.0295 gm (wt.)

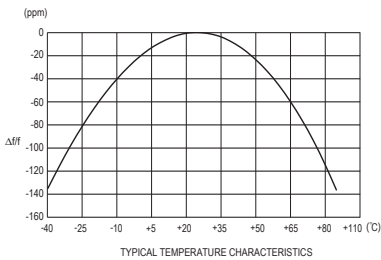
124SMX



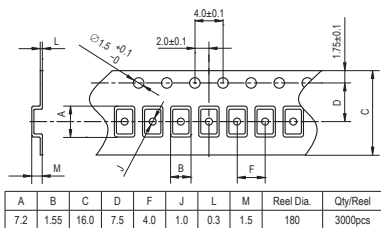
SOLDERING PATTERN



XY-CUT



TAPE SPECIFICATIONS



STANDARD SPECIFICATIONS

Item	Symbol	Specifications
Part number	P/N	124M327* ¹
Package Type		124SMX* ²
Nominal frequency	F	32.768 kHz
Frequency tolerance (at +25°C)	$\Delta f/F$	AAA : ± 5 ppm AA : ± 10 ppm A : ± 15 ppm B : ± 20 ppm C : ± 30 ppm (Standard)
Load capacitance	CL	12.5 pF : 124M327 (Standard) 9.0 pF : 124M327-9 7.0 pF : 124M327-7 (Standard) 6.0 pF : 124M327-6 4.4 pF : 124M327-4.4 3.7 pF : 124M327-3.7
Equivalent series resistance	ESR	65k Ω max. / To : -40°C to +85°C (Standard) 50k Ω max. / To : -40°C to +85°C (R = Option)
Drive level	P	0.1 μ W (1 μ W max.)
Turnover temperature	Tt	+25°C $\pm 5^\circ$ C
Temperature coefficient	β	-0.035 ppm / $^\circ$ C ² , Typical
Quality factor	Q	40000 min.
Shunt capacitance	C0	0.8 pF, Typical
Motional capacitance	C1	0.0019 pF, Typical
Capacitance ratio	γ	420, Typical
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	-40°C to +85°C
Storage temperature range	Ts	-55°C to +125°C
Shock resistance	$\Delta f/F$	± 5 ppm max.
Vibration resistance	$\Delta f/F$	± 5 ppm max.
IR reflow resistance	$\Delta f/F$	± 10 ppm max.
Reflow condition		10 seconds max. at +250°C $\pm 10^\circ$ C (2 times)

(*¹)No pattern path underneath the 124SMX.
(*²)The crystal metal body may be visible inside the mold. It does not affect the crystal performance.

PACKAGE DATA

Item	Package	124SMX
Outer package		Epoxy
Sealing		Press-fit (1.2 x 4.7 mm built in)
Terminal		42 alloy
Terminal plating		Sn
RoHS		Compliant

XTAL

CLK OSC

VCXO

TCXO

OCXO

MCF