

FEATURES

- Temperature range -40° to +125°C available
- Resistance weld, hermetically sealed package
- Fully RoHS compliant
- Frequency range 3.579545MHz to 30.0MHz

DESCRIPTION

92SMX crystals are hermetically-sealed and will operate satisfactorily over the temperature range -40° to +125°C. Available on tape and reel, this fully RoHS-compliant crystal is an ideal choice of frequency-control component for high temperature environments.

SPECIFICATION

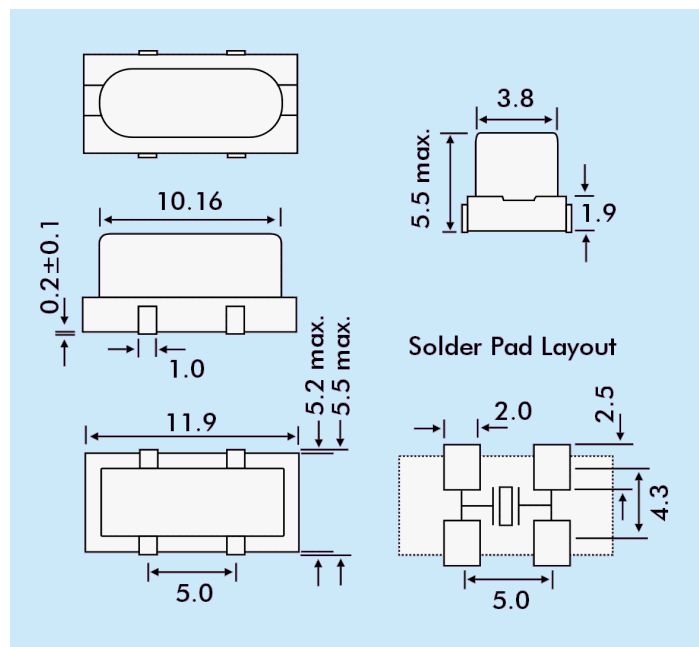
Frequency Range:	3.579545MHz to 30.000MHz
Crystal Cut/Oscillation Mode:	AT-Cut, Fundamental
Calibration Tolerance at 25°C*:	from ±10ppm (±10, ±15 or ±20ppm standard)
Frequency stability:	See table
Storage Temperature:	-55°~+125°C
Effective Series Resistance:	See table
Shunt Capacitance (C0):	5pF typical
Load Capacitance (CL):	Series or 10pF to 32pF (Customer specified CL)
Ageing:	< ±3ppm per year at +25°C
Drive level:	100 µW max. (10 µW for testing.)
Reflow Soldering:	10s maximum at 250°C
Package:	Metal base, metal lid, Hermetic seal, resistance-Weld
Packaging:	24mm EIA tape and reel, 330mm reel, 2000 pieces per reel

STABILITY OVER TEMPERATURE RANGE (✓ = Available)

Temp. Range °C	Stability ppm									
	±3.0	±5.0	±7.5	±10	±15	±20	±30	±50	±100	±150
0~+45	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
0~+50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
0~+60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
0~+70	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-10~+50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-10~+60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-10~+70		✓	✓	✓	✓	✓	✓	✓	✓	✓
-10~+75			✓	✓	✓	✓	✓	✓	✓	✓
-20~+70			✓	✓	✓	✓	✓	✓	✓	✓
-20~+75				✓	✓	✓	✓	✓	✓	✓
-30~+75					✓	✓	✓	✓	✓	✓
-30~+80						✓	✓	✓	✓	✓
-30~+85							✓	✓	✓	✓
-35~+80								✓	✓	✓
-40~+85									✓	✓
-40~+90										✓
-40~+105										
-40~+125										



OUTLINE & DIMENSIONS



EQUIVALENT SERIES RESISTANCE

Frequency Range MHz	ESR Ω Max.
3.5 ~ 3.99	200
4.0 ~ 5.99	150
6.0 ~ 9.99	100
10.0 ~ 13.99	80
14.0 ~ 24.99	50
25.0+	40

PART NUMBER GENERATION

Example:	4.000MHz	92SMX/20/30/-20+70/18pF
Nominal Frequency	4.000MHz	
Package (92SMX)		92SMX
Calibration tolerance at 25°C (±ppm)		20/30
Temperature Stability over temp. range (±ppm)		-20+70
Operating Temp. Range (°C) (Lower and upper limits)		
Load Capacitance (Either SR for series or CL in pF)		18pF