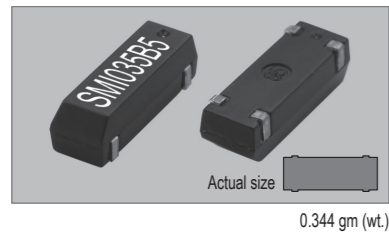
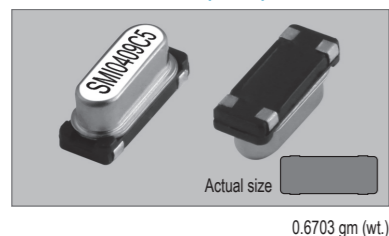


XTAL

86SMX(LPN)



86SMX(CSM)



CLK OSC

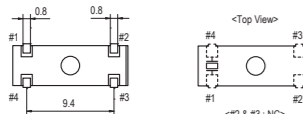
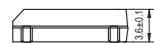
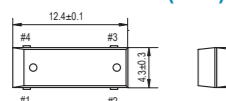
VCXO

TCXO

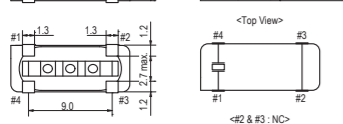
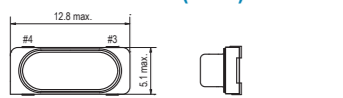
OCXO

MCF

86SMX(LPN)

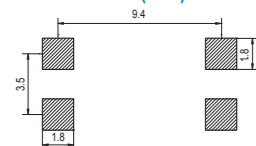


86SMX(CSM)

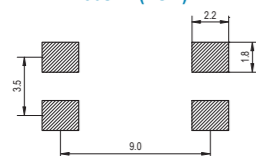


SOLDERING PATTERN

86SMX(LPN)



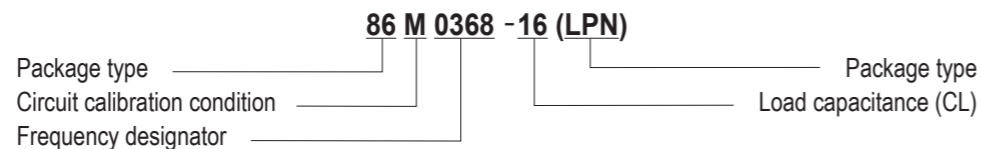
86SMX(CSM)



STANDARD SPECIFICATIONS

Item	Specifications	
	86SMX(LPN)	86SMX(CSM)
Package type	86SMX(LPN)	86SMX(CSM)
Frequency range	3.579545 MHz to 32.000 MHz	
Frequency tolerance	±50 ppm at +25°C ±3°C	
Temperature stability (referred to +25°C)	±50 ppm over -20°C to +70°C	
Load capacitance (CL)	16 pF, Typical	
Shunt capacitance (C0)	5 pF max.	
Drive level (P)	100 µW max. (10 µW for testing)	
Aging	±5 ppm max. at +25°C ±3°C per year	
Cut / Oscillation mode	AT-Cut / Fundamental	
Reflow condition	10 seconds max. at +250°C ±10°C	

PART NUMBERING GUIDE



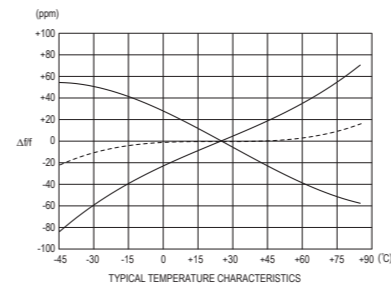
Example

SMI Part No.	Package	Circuit Calibration Condition	Frequency
86M0368-16(LPN)	86(LPN) = 86SMX(LPN)	M = Parallel resonance CL = 16pF	0368 = 3.68640 MHz
86M073-18(CSM)	86(CSM) = 86SMX(CSM)	M = Parallel resonance CL = 18pF	073 = 7.37280 MHz

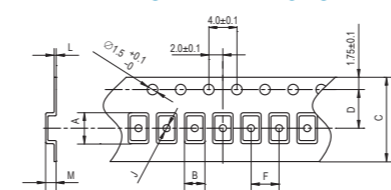
PACKAGE DATA

Item	86SMX(LPN)	86SMX(CSM)
Outer Package / Cover	Plastic	Metal
Base	n.a.	Metal
Insulator	n.a.	46 nylon
Sealing	Press-fit (3x10mm built-in)	Resistance
Terminal lead frame	42 alloy	42 alloy
Terminal plating	Tin / Nickel (surface) / (under)	Tin
RoHS	Compliant	Compliant (Pb-free)

AT-CUT



TAPE SPECIFICATIONS



86SMX(LPN)

A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
12.8	4.8	24.0	11.5	12.0	2.2	0.4	3.9	330	1000pcs

86SMX(CSM)

A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
13.1	5.3	24.0	11.5	12.0	2.2	0.4	5.4	300	1000pcs

86SMX STANDARD FREQUENCIES

Frequency MHz	Frequency Designator	Max. Equivalent Series Resistance Ohms(Ω)ESR	Frequency MHz	Frequency Designator	Max. Equivalent Series Resistance Ohms(Ω)ESR
3.579545	035	200	18.543000	18543	50
3.600000	036	200	19.200000	192	50
3.686400	0368	200	19.660800	196	50
4.000000	040	150	20.000000	200	40
4.032000	0403	150	20.480000	2048	40
4.096000	0409	150	20.940000	2094	40
4.194304	041	150	21.425660	214	40
4.433619	044	150	22.118400	221	40
4.608000	046	150	23.438000	234	40
4.800000	048	150	23.961600	239	40
4.915200	049	150	24.000000	240	40
5.000000	050	120	24.576000	245	40
5.068800	0506	120	25.000000	250	40
5.120000	0512	120	27.000000	270	40
5.256200	0525	120	28.224000	282	40
6.000000	060	100	29.491200	294	40
6.144000	061	100	30.000000	300	40
6.400000	064	100	32.000000	320	40
6.650000	0665	100			
7.372800	073	80			
7.441400	074	80			
7.621000	0762	80			
7.680000	0768	80			
8.000000	080	80			
8.192000	08192	80			
9.216000	092	60			
9.537500	095	60			
9.600000	096	60			
9.830400	098	60			
10.000000	100	60			
10.240000	1024	60			
10.752000	1075	60			
11.000000	110	60			
11.059200	1105	60			
12.000000	120	60			
12.288000	122	60			
12.296000	1229	60			
12.800000	128	60			
13.105000	131	50			
13.500000	135	50			
13.560000	1356	50			
14.250000	142	50			
14.318180	143	50			
14.745600	147	50			
15.000000	150	50			
15.360000	153	50			
16.000000	160	50			
16.384000	163	50			
16.588000	1658	50			
16.667000	166	50			
16.934400	1693	50			
17.734475	1773	50			
18.432000	184	50			

XTAL

CLK OSC

VCXO

TCXO

OCXO

MCF