

ACT844SMX-2

The **ACT844SMX-2** family is a low cost, 2 pad, high quality, low aging 8x4.5mm SMD Crystal in a ceramic base / ceramic lid package, glass sealed for good reliability. The wide frequency range and specification options ensure suitability for many applications.

APPLICATIONS: Instrumentation, Audio-visual, Office automation, Micro Clock, Process Control & Consumer.

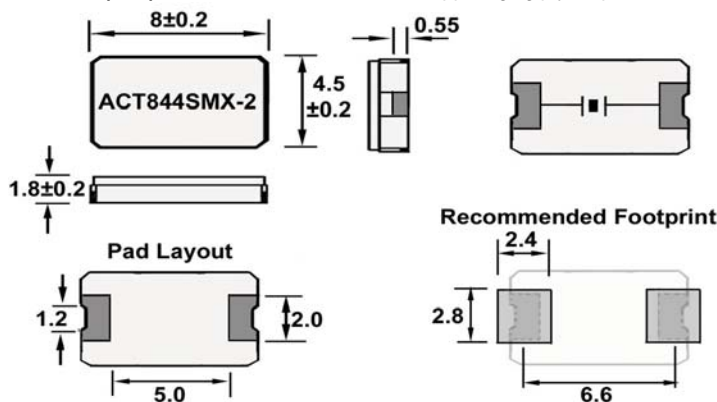


Specification

Parameter	Symbol	Specification	Condition
Frequency Range	f_0	6.0 ~ 160.0MHz	Please specify
Frequency Tolerance (@25°C)	$\Delta f/f_0$	$\pm 10\text{ppm} \sim 50\text{ppm}$	Please specify
Stability over temp range	T_c	$\pm 5, \pm 10 \text{ \& } \pm 20, \pm 30 \text{ \& } \pm 50\text{ppm}(\text{Std})$ -Table 2	Please specify
Temp Operating Range	T_{opr}	0~+50°C ~ -20~+70°C (See table 2)	Please specify
Temp Storage Range	T_{stg}	-40 ~+85°C	
Equivalent Series Resistance	ESR	See table 1	
Load Capacitance	CL	16pF ~ 50pF & Series	(16,20 & 30pF Std)
Shunt Capacitance	C0	5pF max	
Drive Level	DL	100 μ W typical (300 μ W max)	(custom available - Please enquire)
Drive Level Dependency	DLD	ESR min to max <1.3 FL min to max <1.3	0.01, 0.1,1,10,50,100 μ W steps
Insulation Resistance	IR	500M Ω min	@ 100V DC
Aging	Fa	$\pm 5\text{ppm p/year}^*$	(First year max @ 25°C)

Dimensions (mm)

* A $\pm 3\text{ppm}$ aging p/year part is available as a "semi-custom" device - Please enquire



Pad Surface Material: Gold
(Au)

Table 1: ESR

Freq. Range (MHz)	ESR (Ω) max	Mode / Cut
6.000 ~ 9.999	100	Fundamental / AT
10.000 ~ 11.999	80	Fundamental / AT
12.000 ~ 14.999	60	Fundamental / AT
15.000 ~ 49.100	50	Fundamental / AT
40.000 ~ 79.999	90	3 RD Overtone / AT
80.000 ~ 90.000	90	3 RD Overtone / AT
90.001 ~ 150.000	150	3 RD Overtone / AT

Table 2 Available Stabilities

Stability / Temp	$\pm 5\text{ppm}$	$\pm 10\text{ppm}$	$\pm 20\text{ppm}$	$\pm 30\text{ppm}$	$\pm 50\text{ppm}$	Standard
0 ~ +50°C	✓	✓	✓	✓	✓	✓
-10 ~ +60°C	✓	✓	✓	✓	✓	
-20 ~ +70°C		✓	✓	✓	✓	
-30 ~ +80°C		✓	✓	✓	✓	
-40 ~ +85°C			✓	✓	✓	

Please note that all parameters can not necessarily be specified in the same device

Customer to specify : Frequency, Frequency Tolerance, Temperature Stability, Operating Temperature & Load Capacitance

In line with our ongoing policy of product evolution and improvement, the above specification may subject to change without notice

ISO9001 Registered

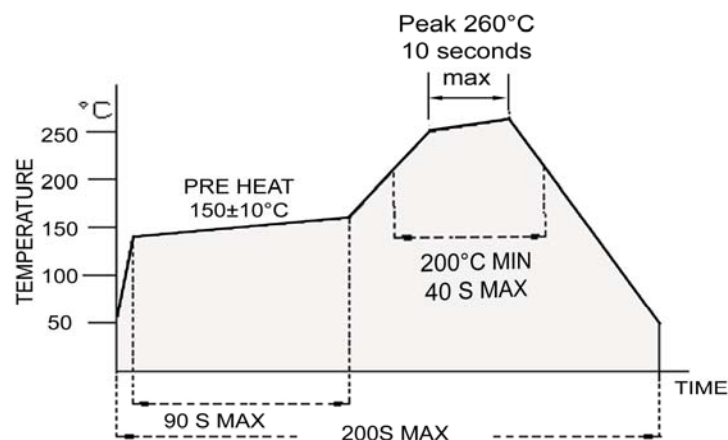
For quotations or further information please contact us at:

3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK

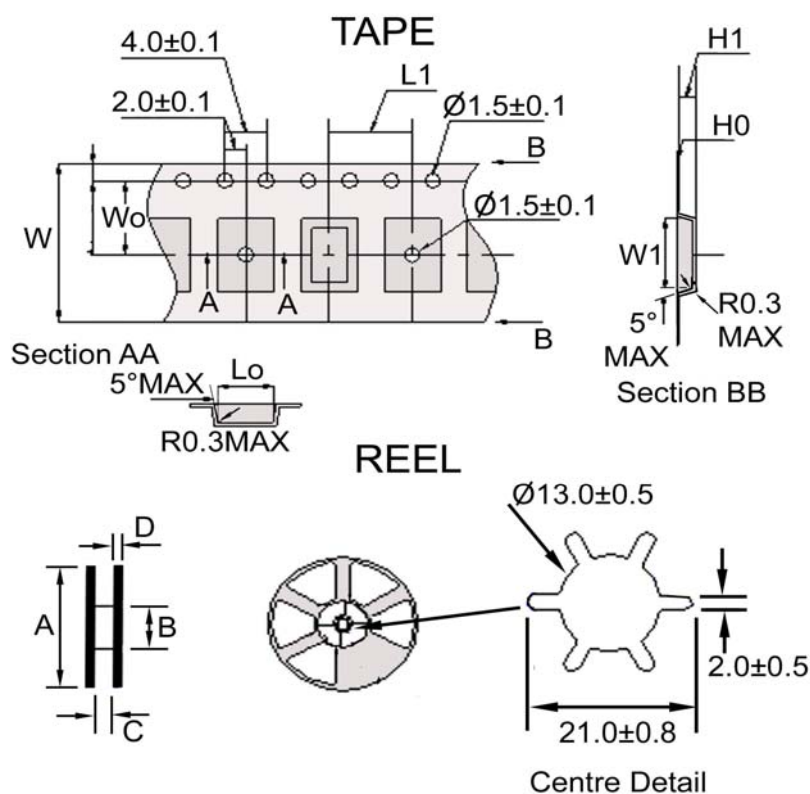
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ACT844SMX-2

Standard Re-flow Profile



TAPE & REEL SPECIFICATION Standard reel quantity 1000 pieces



	TAPE							REEL			
	W	Wo	W1	Lo	L1	Ho	H1	A	B	C	D
Tolerance	±0.3	0.1	±0.1	±0.1	±0.1	±0.05	±0.1	±2	±1	±1	±0.5
Dimension	16.0	7.5	8.5	5.1	8.0	0.3	2.3	180	60	17.5	2.0

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ISO9001:2000 Registered - Registration number 6830/2

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Date 14/12/2010

SERIES : ACT844SMX-2 Part numbering code is CH

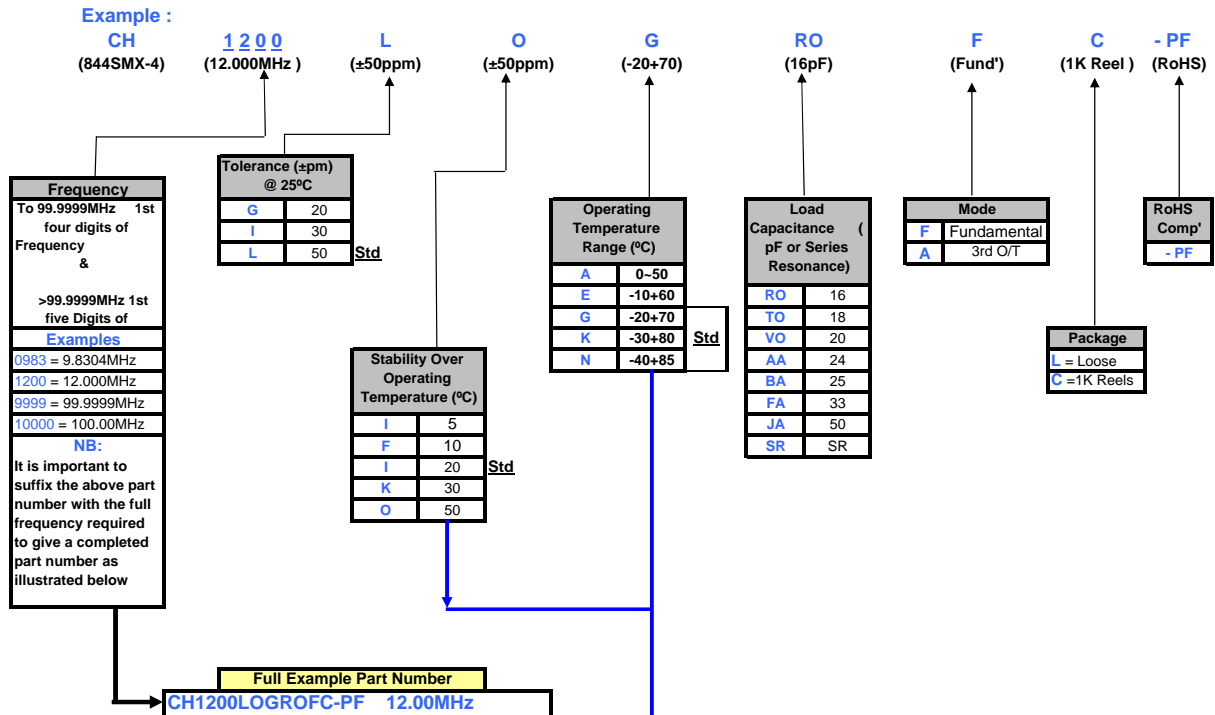


Table 2 Available Stabilities

Stability	± 5 ppm	± 10 ppm	± 20 ppm	± 30 ppm	± 50 ppm	Standard
Temp						
0 ~ +50°C	✓	✓	✓	✓	✓	✓
-10 ~ +60°C	✓	✓	✓	✓	✓	✓
-20 ~ +70°C		✓	✓	✓	✓	✓
-30 ~ +80°C		✓	✓	✓	✓	✓
-40 ~ +85°C			✓	✓	✓	✓

NOTES :

- 1) Tighter Tolerances and Stabilities and other Operating Temperature Ranges may be available
As each of these specification parameters impact on each other, it is not always possible to combine all options in one device. Therefore, if a specification not catered for above is required, please contact us directly for the relevant part number code(s).
- 2) ACT are always happy to consider truly custom specification parts which may require non-standard specification parameters, specific testing, customer requested AQL requirements, non standard packaging or taping and reeling and custom marking. Such devices would normally be allocated a custom specification part number which is wholly customer specific. (MOQ dependent)
(EG : A 12.00MHz custom ACT844SMX-4 device may have a part number such as CH1200C- C2222-PF)
- 3) A guide to availability of tighter stabilities appears in Table 2
- 4) Frequencies below 10.000MHz are prefixed with a "0" (eg: 0900 = 9MHz. Whereas 10.000MHz is 1000 and 100Mhz is 10000)

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