



## ACT534SMX-2

The **ACT534SMX-2** family is a low cost, 2 pad, high quality, low aging 5x3.2mm 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, Notebook, Security, Games, Audio-visual, Office automation, Micro Clock, Process Control & Consumer.

### Specification

Parameter	Symbol	Specification	Condition
Frequency Range	fo	10.0 ~ 12 MHz Refer to table 3: Developed frequencies 12.001~49.09MHz Fundamental	Please specify
Frequency Tolerance (@25°C)	Δf/fo	±20*, ±30 & ±50ppm(Std)	Please specify
Stability over temp range	Tc	±20ppm ~ 50ppm (See table 2)	Please specify
Temp Operating Range	Topr	0~+50°C ~ -20~+70°C(std) ( See table 2)	Please specify
Temp Storage Range	Tstg	-40 ~+85°C	
Equivalent Series Resistance	ESR	See table 1	
Load Capacitance	CL	16pF ~ 50pF & Series (16, 20 & 30pF Standard please specify)	
Shunt Capacitance	C0	5pF max	
Drive Level	DL	100μW typical 500μW max	
Drive Level Dependency	DLD2 FDLD	<12MHz 15max/ 12-20MHz 12 max />20MHz 10 max FL min to max <1.3	0.01, ~, 100μW 6 steps
Insulation Resistance	IR	500MΩ min	@100V DC
Aging	Fa	±5ppm p/year*	(First year max @ 25°C)

\* A ±3ppm aging p/year part is available as a "semi-custom" device - Please enquire.

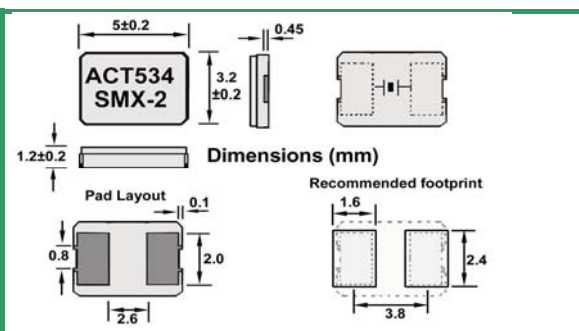


Table 1

Frequency Range (MHz)	ESR (Ω) max	Mode / Cut
10.000 ~ 11.999	80	Fundamental / AT
12.000 ~ 14.999	60	Fundamental / AT
15.000 ~ 49.090	50	Fundamental / AT

Table 2 Standard Stabilities

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

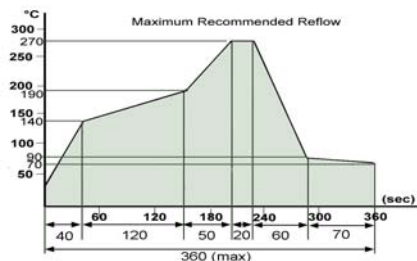
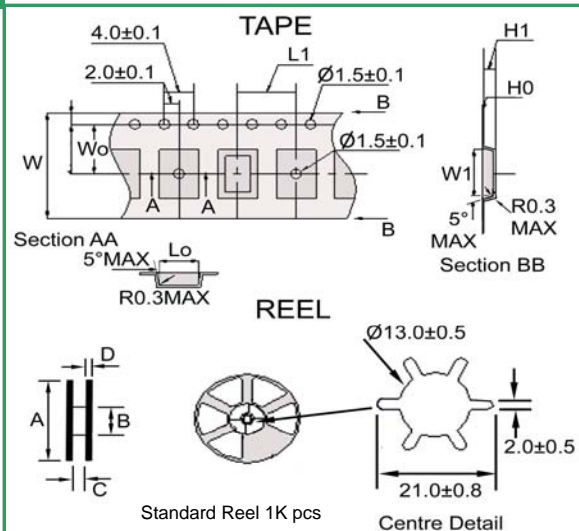
\*±20ppm for frequencies <27MHz please enquire

Table 3

Developed Frequencies
10.000MHz - 12.0MHz
10.000 MHz
11.0592MHz
12.000MHz

Others: Enquire

Pad Surface  
Material: Gold (Au)



Tolerance Dimension	TAPE							REEL			
	W	W0	W1	Lo	L1	Ho	H1	A	B	C	D
	±0.2	±0.05	±0.1	±0.1	±0.1	±0.05	±0.1	±1	±1	±0.5	±0.2
	12.0	5.5	5.45	3.5	8.0	0.3	1.6	180	80	13.5	2.0

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

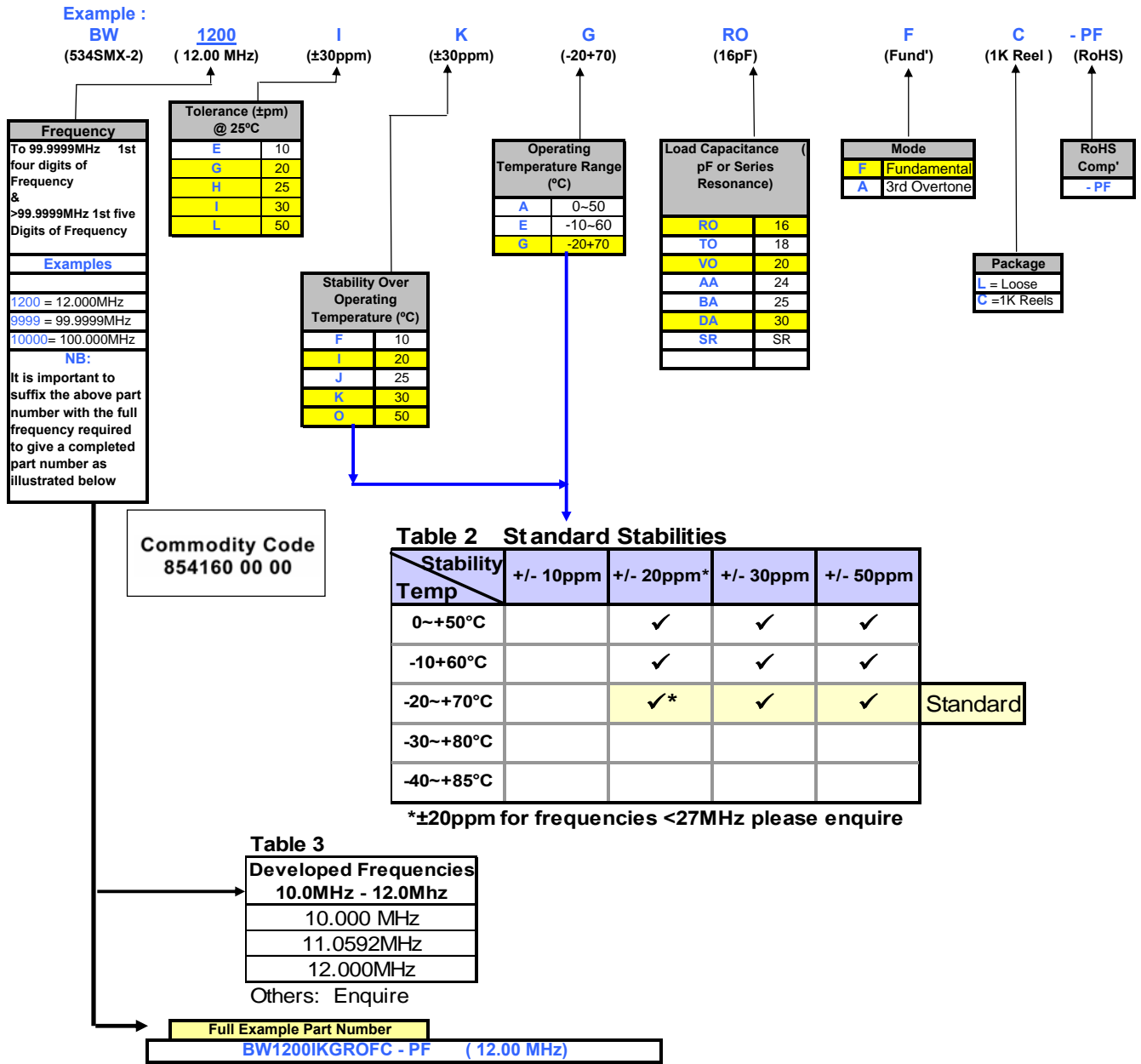
ISO9001:2000 Registered

For quotations or further information please contact us at:

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

<http://www.actcrystals.com>

**SERIES : ACT534MX-2 Part numbering code is BW**



**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.  
 ( EG : A 12.00MHz custom ACT534SMX-2 device may have a part number such as BW1200C- C1500-PF)
- 3) A guide to availability of tighter stabilities appears in the tables above.