

## ACT752SMX-2

The **ACT752SMX-2 family** is a low cost, 2 pad, high quality, low aging 7x5mm SMD Crystal in a ceramic base / metal lid package, seam sealed for good long term reliability. The wide frequency range and specification options ensure suitability for many applications.

**APPLICATIONS:** Wireless/WLAN, ATM, Cordless phones, Pagers, PC & Notebook,



### Specification

Parameter	Symbol	Specification	Condition
Frequency Range	fo	6.0 ~ 100.0MHz	Please specify
Frequency Tolerance (@25°C)	$\Delta f/fo$	$\pm 30$ & $\pm 50$ ppm Standard	Or specify
Stability over temp range	Tc	$\pm 50$ ppm -10~+60°C Standard	Or specify
Temp Operating Range	Topr	0~+50°C ~ -40~+85°C	Please specify
Temp Storage Range	Tstg	-55 ~ +125°C	
Equivalent Series Resistance	ESR	See table 1	
Load Capacitance	CL	8pF, 10pF, 16pF, 20pF & Series	Or specify
Shunt Capacitance	C0	5pF max	
Drive Level	DL	10~100 $\mu$ W 50 $\mu$ W standard	(Custom available - Please enquire )
Drive Level Dependency	DLD	FDLD <10ppm ESR max / ESR min <1.3	0.1, 1.5, 10, 50, 100 $\mu$ W steps
Insulation Resistance	IR	500M $\Omega$ min	@100V DC
Aging	Fa	$\pm 5$ ppm p/year	(First year max @ 25°C)

Table 1	Freq. Range (MHz)	ESR ( $\Omega$ ) max	Mode / Cut
	6.000 ~ 7.999	150	Fundamental / AT
	8.000 ~ 8.999	100	Fundamental / AT
	9.000 ~ 11.000	50	Fundamental / AT
	11.000 ~ 40.000	40	Fundamental / AT
	26 ~ 100MHz	100	3 <sup>RD</sup> Overtone / AT

Pad Surface Material: Gold (Au)

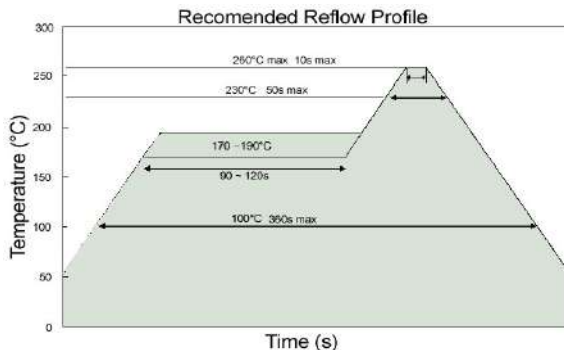
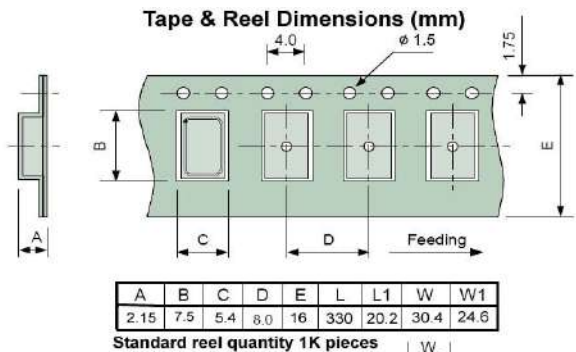
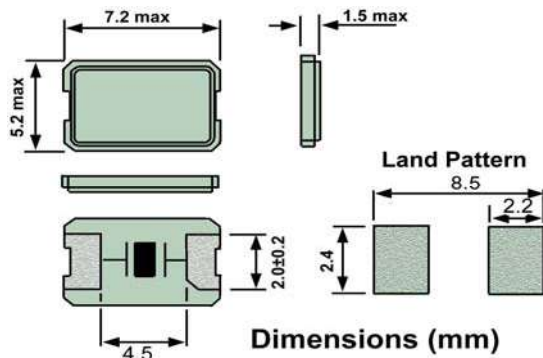


Table 2		$\pm 10$ ppm	$\pm 15$ ppm	$\pm 20$ ppm	$\pm 30$ ppm	$\pm 50$ ppm
Tolerance	25°C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	STD	STD
Stability	0 ~ +50°C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	-10 ~ +60°C	Enquire	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	STD	STD
	-20 ~ +70°C	Enquire	Enquire	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	-40 ~ +85°C	Enquire	Enquire	Enquire	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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:

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<http://www.actcrystals.com>

**SERIES : ACT752SMX-2 Part numbering code is GA**

Example :

**GA**      **1200**      **I**      **K**      **G**      **RO**      **F**      **C**      **-PF**  
 752SMX-2      (12.000MHz)      (±30ppm)      (±30ppm)      (-20+70)      (16pF)      (Fund')      (1K Reel)      (RoHS)

Frequency	Tolerance (±ppm) @ 25°C	Stability Over Operating Temperature (°C)	Operating Temperature Range (°C)	Load Capacitance (pF or Series Resonance)	Mode	Package	RoHS Comp'
6-9.999MHz 0 and 1st 3 digits of frequency	E 10	F 10	A -0+50	GO 8	F Fundamental	L = Loose	-PF
10-99.999MHz 1st four digits of Frequency. See note 4	F 15	G 15	E -10+60	JO 9	A 3rd Overtone	C = 1K Reels	
100MHz 1st five digits of Frequency	G 20	I 20	G -20+70	KO 10			
	H 25	K 30	L -30+85	MO 11			
	I 30	O 50	M -40+85	OO 12			
	L 50	V 100		ZO 14			
				PO 15			
				RO 16			
				TO 18			
				VO 20			
				AA 24			
				BA 25			
				DA 30			
				SR SR			

**Table 2**

	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
Tolerance	25°C	☑	☑	☑	STD
Stability	0 ~ +50°C	☑	☑	☑	☑
	-10 ~ +60°C	Enquire	☑	☑	STD
	-20 ~ +70°C	Enquire	Enquire	☑	STD
	-40 ~ +85°C	Enquire	Enquire	Enquire	☑

**Full Example Part Number**  
**GA1200IKGROFC - PF 12.0000MHz**

**NOTES :**

- 1) Tighter Tolerances and Stabilities and other Operating Temperature Ranges may be available.
- 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 ACT752SMX-2 device may have a part number such as GA1200C- C1122-PF)
- 3) A guide to availability of tighter stabilities appears on page one of this data sheet in Table 2
- 4) Frequencies below 10.000MHz are prefixed with a "0" (eg: 0900 = 9MHz. Whereas 10.000MHz is 1000 )