

AT-CUT CRYSTAL UNIT (SMD · Metal-can Type)

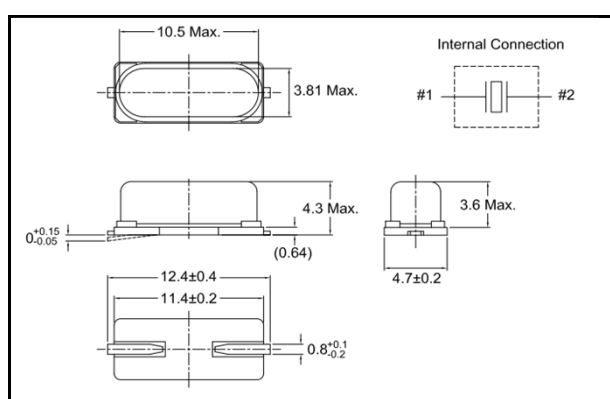
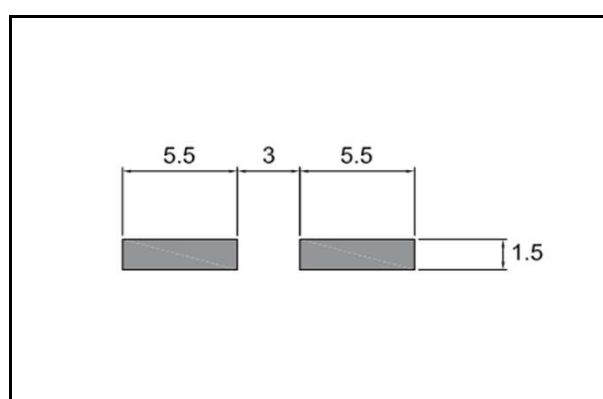
RoHS compliant

HCM49

1,000pcs/reel

**■ FEATURES**

- Frequency range : 3.5 ~ 50.0MHz
- External dimensions (mm)
L : 11.4 x W : 4.7 x H : 4.3
- Applications
Consumer products

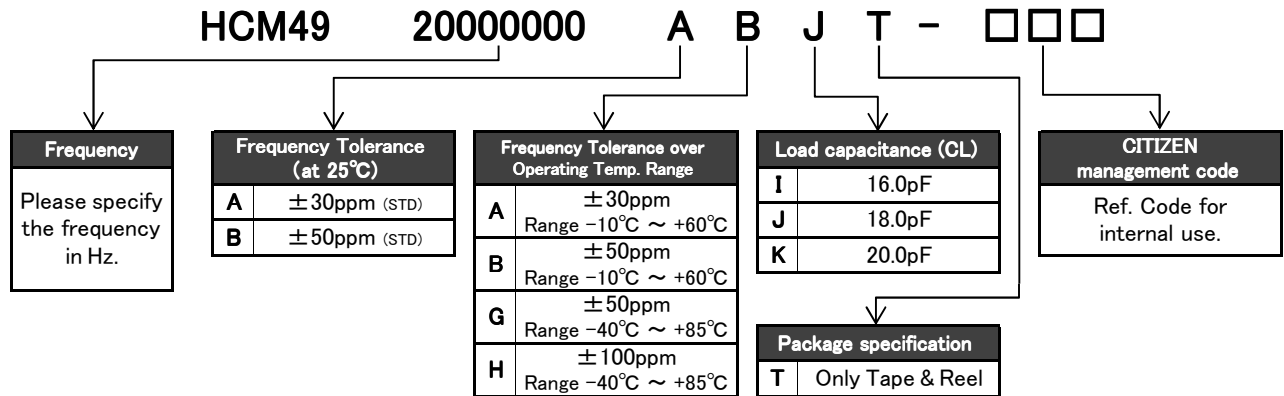
■ DIMENSION [mm]**■ SOLDER PAD LAYOUT [mm]****■ STANDARD SPECIFICATIONS**

Item	Model	HCM49	Conditions
Nominal Frequency	f_0	3.5MHz ~ 30.0MHz (Fundamental) 30.0MHz ~ 50.0MHz (3rd Overtone)	Please contact us for frequencies available
Frequency Tolerance	$\Delta f/f_0$	$\pm 30\text{ppm}$	at 25°C
Frequency Tolerance over Operating Temperature Range	$\Delta f/f_0$	below 6.0MHz: $\pm 50\text{ppm}$ above 6.0MHz: $\pm 30\text{ppm}$	-10°C ~ +60°C
Operating Temperature Range	T_{OPR}	-40°C ~ +85°C	
Storage Temperature Range	T_{STR}	-55°C ~ +125°C	
Motional (series) resistance	R_1	Refer to the following table	at 25°C
Load capacitance	C_L	Fundamental: 10.0pF ~ ∞ 3rd Overtone: 5.0pF ~ ∞	Please specify your requirement
Shunt capacitance	C_0	7.0pF Max.	
Level of drive	D_L	100 μW	
Insulation Resistance	I_R	500M Ω Min.	DC100V $\pm$ 15V
Aging (first year)	$\Delta f/f_0$	$\pm 5\text{ppm}$ Max.	25°C $\pm$ 3°C

■ MOTIONAL (SERIES) RESISTANCE (R_1)

Freq. Range (MHz)	$3.5 \leq f_0 < 4.0$	$4.0 \leq f_0 < 6.0$	$6.0 \leq f_0 < 10.0$	$10.0 \leq f_0 < 14.0$	$14.0 \leq f_0 < 30.0$	$30.0 \leq f_0 < 36.0$	$36.0 \leq f_0 \leq 50.0$
Mode	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	3rd Overtone	3rd Overtone
R_1	200 Ω Max.	150 Ω Max.	100 Ω Max.	80 Ω Max.	50 Ω Max.	140 Ω Max.	100 Ω Max.

■ PART NUMBERING SYSTEM



*Please contact us for specifications available.

■ Part Marking [standard]



f : The first 4 digits of Frequency including the decimal point

C : Manufacture's ID Code

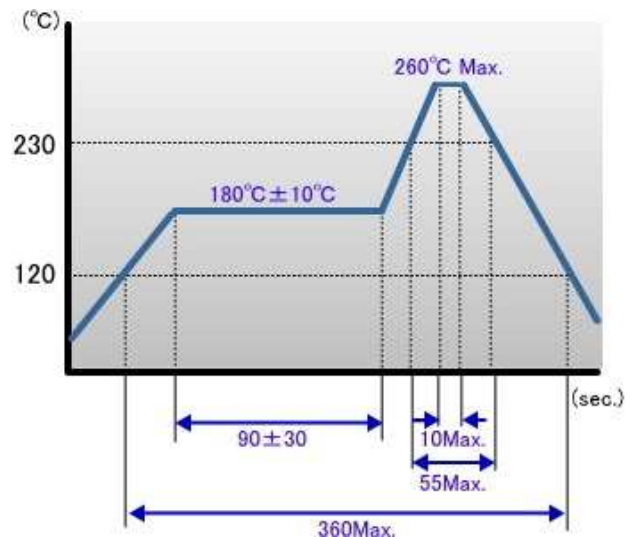
y : The last digit of production year

m : Production month (See Table.1)

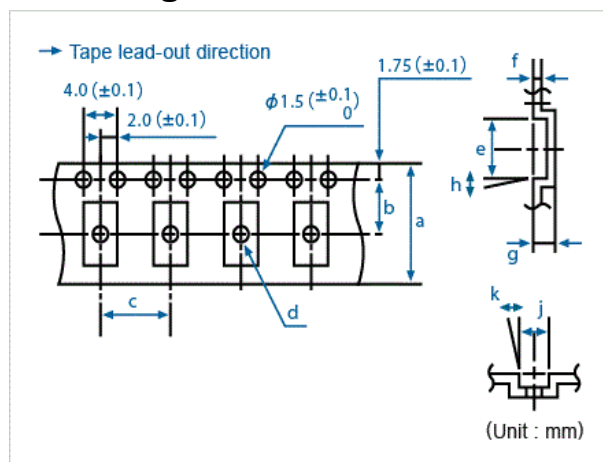
Table.1

Month	Jan	Feb	...	Sep	Oct	Nov	Dec
Code	1	2	...	9	X	Y	Z

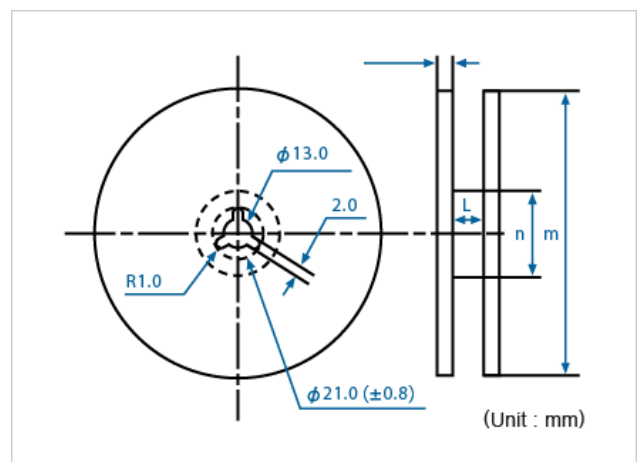
■ Reflow profile



■ Packing



Conforming to JIS C 0806 TB1208NEIAJ and RC-1009B TE1208N



Conforming to JIS C 0806 R12R and EIAJ RC-1009B R15

Q'ty/reel	a	b	c	d (ϕ)	e	f	g	h	j	k	l	m (ϕ)	n (ϕ)
1,000	24.0	11.5	12.0	2.0	14.1	0.4	4.2	5°	6.5	5°	25.5	330	80

Product specifications are subject to change without notice.

Rev.2