



## SMD CRYSTAL UNITS

### ◆HC-49SMD(3P) Crystal



This part is a miniature AT cut strip  
crystal units with a low profile package.  
It is with resistance weld.

#### FEATURES

- Low Cost
- Industry Standard
- Wide Frequency Range
- Excellent Aging

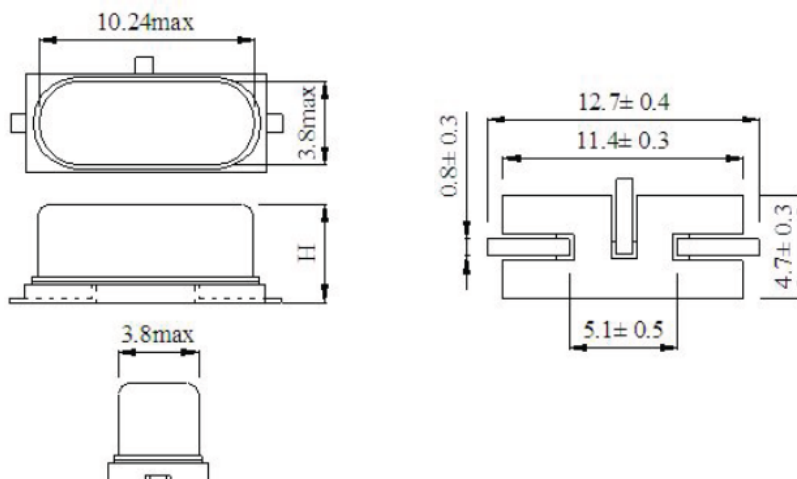
#### ◆标准规格Electrical Specifics

Item	Type	HC-49SMD(3P)
标准频率Frequency Range	F0	3.2MHz~66.000MHz
负载电容Load Capacitance	CL	10pF to Series
调整频差Frequency Tolerance $\Delta F/F0$		$\pm 10\text{ppm}, \pm 20\text{ppm} \pm 30\text{ppm} \pm 50\text{ppm} (\text{At } 25^\circ\text{C})$
等效电阻Equivalent Series Resistance ESR		See Table 1
温度频差Temperature Stability TC		$\pm 10\text{ppm}, \pm 30\text{ppm}, \pm 50\text{ppm} (\text{Rsfert to } 25^\circ\text{C})$
工作温度Operating Temperature Range		$-20 \sim +70^\circ\text{C}, -40 \sim +85^\circ\text{C}$ Option
贮存温度Storage Temperature Range		$-55 \sim +125^\circ\text{C}$
静态电容Shunt Capacitance $C_0$		7pF max.
绝缘电阻Insulator Resistance IR		500M $\Omega$ min. (At 100VDC)
激励功率Drive level DL		100 $\mu\text{W}$ (500 $\mu\text{W}$ max)
老化率Aging Fa		$\pm 5\text{ppm}$ max. (AT25 $^\circ\text{C}$ , First year)
最小包装Packing Unit		200pcs/bag

#### ◆等效电阻Table 1:Equivalent Series Resistance(ESR) and Mode of Vibration(Mode)

Frequency Range(MHz)	Maz ESR( $\Omega$ )	Mode	Frequency Range(MHz)	Max ESR( $\Omega$ )	Mode
3.200 to 4.499	150	Fundamental/AT	9.000 to 9.999	60	Fundamental/AT
4.500 to 5.999	120	Fundamental/AT	10.000 to 12.999	50	Fundamental/AT
6.000 to 6.999	100	Fundamental/AT	13.000 to 29.999	40	Fundamental/AT
7.000 to 7.999	90	Fundamental/AT	30.000 to 48.000	30	Fundamental/AT
8.000 to 8.999	80	Fundamental/AT	30.000 to 66.000	80	3rd Overtone

#### ◆外型尺寸Mechanical Dimensions(mm)

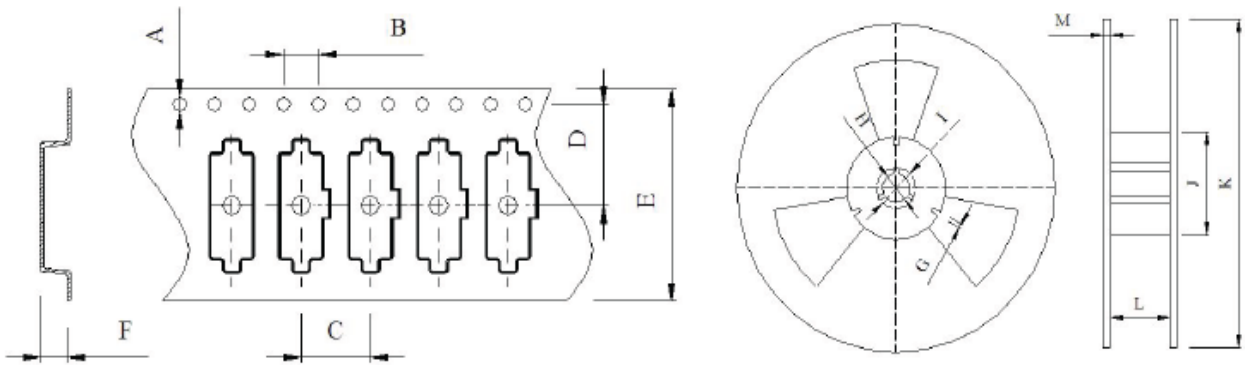




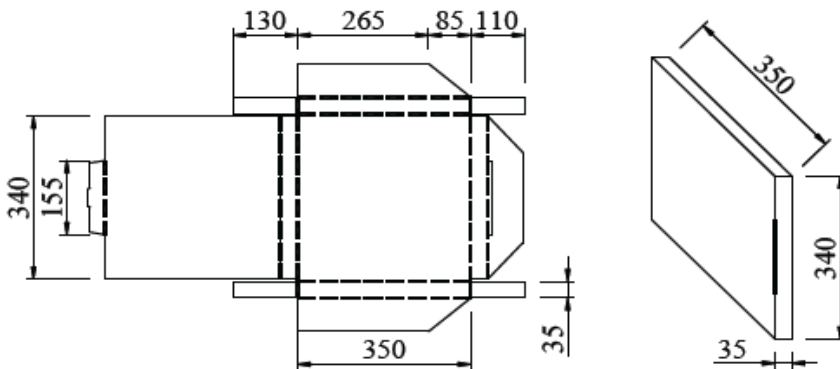
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### ■ 包装 Packing

T/R: 1000pcs/ REEL



Model	A	B	C	D	E	F	G	H	I	J	K	L	M
HC-49SMA	Φ 1.50	4.0	12.0	11.5	24.0	4.35	2.5	Φ 13.5	21.6	99.5	330	24.0	2.3
HC-49SMB	Φ 1.50	4.0	12.0	11.5	24.0	3.5	2.5	Φ 13.5	21.6	99.5	330	24.0	2.3



Notes:

1 units: mm

2 --- 折痕

1 REEL = 1 INNER BOX

10Box= 1Outer Box