



规格书

SPECIFICATIONS

客户名称:
Customer: _____

产品名称: 石英晶体谐振器
Description: CRYSTAL RESONATOR

产品型号: HC-49SMD 3P
SPECIES _____

标称频率: 8.000 MHz
FREQUENCY _____

料号:
MATERIAL CODE SCBXS08X000000ELSL

供应商确认				客户确认			
品管部 QC Dept	工程部 Engineer Dept	业务部 Trade Dept	☒ 合格 PASS	品管部 QC Dept	工程部 Engineer Dept	采购部 Purchase Dept	☐ 合格 PASS
郭 淘	梁 雄	陈 晓 群	☐ 不合格 NG				☐ 不合格 NG

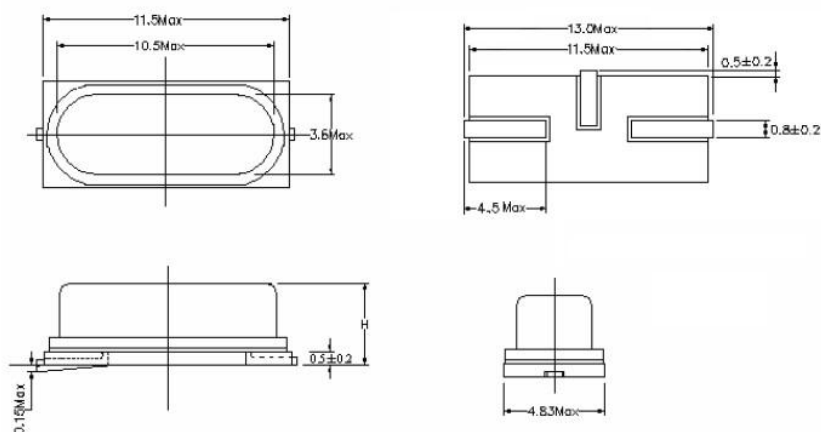
公司地址: 四川省泸县工业园 B 区明星路 204 号 (坤羽) 5、6 栋

电话: 0830-8106299、8172777 传真: 0830-8106266

SPECIFICATION

No : 49SMD-3P-12M-20PF-20PPM

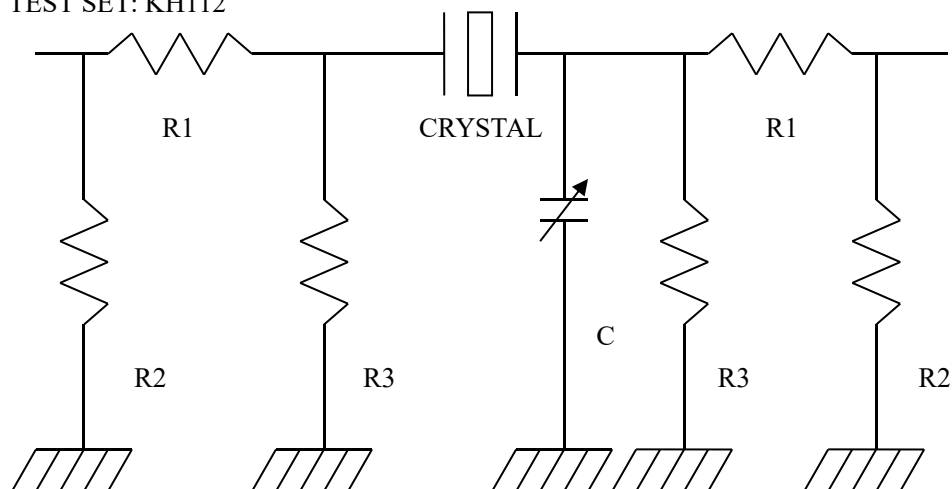
1. HOLDER TYPE : HC-49SMD-3P-T
2. NOMINAL FREQUENCY : 8.000MHZ
3. ELECTRICAL CHARACTERISTICS
 - (1) MODE OF OSCILLATION : AT-CUT FUND.
 - (2) OPERATING TEMP. RANGE : $-20\sim+70^{\circ}\text{C}$
 - (3) STORAGE TEMP. RANGE : $-40\sim+85^{\circ}\text{C}$
 - (4) LOADING CAPACITANCE : 20PF
 - (5) DRIVE LEVEL : 100 μW
 - (6) FREQUENCY TOLERANCE : $\leq \pm 30\text{PPM}$
 - (7) TEMP. DRIFT : $\leq \pm 30\text{PPM}$
 - (8) EQUIVALENT RESISTANCE : $\leq 60\Omega$
 - (9) SHUNT CAPACITANCE : $\leq 5\text{PF}$
 - (10) INSULATION RESISTANCE : $\geq 500\text{ M}\Omega$ MIN / DC 100V
 - (11) AGING RATE PER YEAR : $\pm 5\text{ PPM}$
4. TEST SET : KH1120 NETWORK ANALYZER
5. SIZE
MARKING: 8.000



H : 4.5 mm Max.

CRYSTAL TEST CIRCUIT

TEST SET: KH112

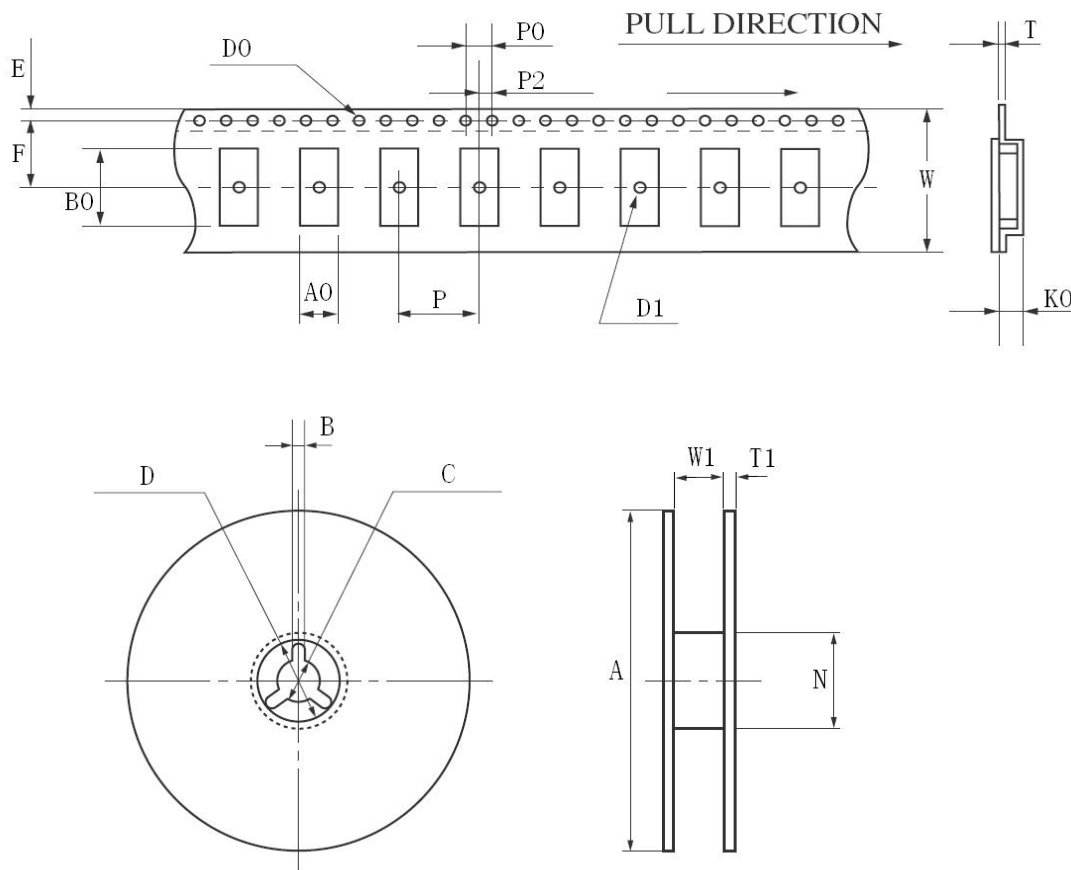


R1: PI top resistor = $66.2\ \Omega$

R2: PI outer resistor = $159\ \Omega$

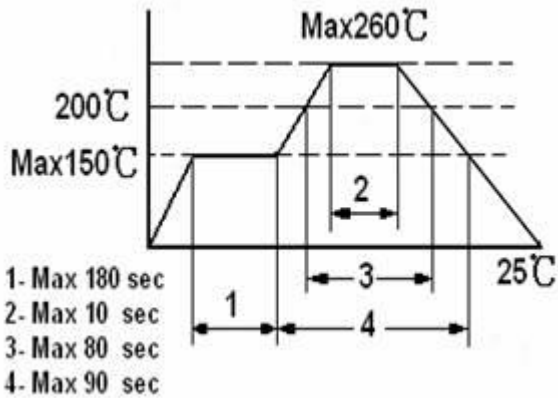
R3: PI inner resistor = $14.2\ \Omega$

PACKING METHOD



	HC-49SMD	8045	7050	6035	5032	4025	3225
W	24.00±0.30	16.00±0.05	16.00±0.05	12.00±0.05	12.00±0.05	12.00±0.05	12.00±0.05
E	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10	1.75±0.10
F	11.5±0.10	7.5±0.10	7.5±0.10	5.5±0.10	5.5±0.10	5.5±0.10	5.5±0.10
T	0.40±0.05	0.35±0.05	0.35±0.05	0.35±0.05	0.35±0.05	0.35±0.05	0.30±0.05
P	12.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10	8.00±0.10
P0	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10	4.00±0.10
P2	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10	2.00±0.10
D0	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10
D1	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN
A0	4.60±0.10	4.85±0.10	5.40±0.10	3.90±0.10	3.60±0.10	2.80±0.10	2.85±0.10
K0	4.40±0.10	1.90±0.10	1.80±0.10	1.50±0.10	1.10±0.10	0.90±0.10	0.85±0.10
B0	14.20±0.15	8.60±0.15	7.40±0.10	6.40±0.10	5.40±0.10	4.30±0.10	3.55±0.10
A	φ 330±1.0	φ 178±2.0	φ 178±2.0	φ 178±2.0	φ 178±2.0	φ 178±2.0	φ 178±2.0
B	2.30±0.20	2.00±0.50	2.00±0.50	2.00±0.50	2.00±0.50	2.00±0.50	2.00±0.50
C	φ 13.5±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20	φ 13.2±0.20
D	φ 21.5±0.20	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50	φ 20.0±0.50
N	φ 100.0±0.5	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0	φ 60.5±1.0
W1	24.5±0.20	16.5±0.20	16.5±0.20	12.5±0.20	12.5±0.20	12.5±0.20	12.5±0.20
T1	2.30±0.20	1.80±0.20	1.80±0.20	1.80±0.20	1.80±0.20	1.80±0.20	1.80±0.20

MECHANICAL CHARACTERISTICS

	Item	Condition	Standard
1.	Drop characteristics	Free drop from 50cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)	Frequency change: $\leq \pm 5\text{ppm}$
2	Mechanical shock	Device are shocked to half sine wave (1000g) three mutually perpendicular axes each 3 times	Frequency change: $\leq \pm 5\text{ppm}$
3.	Shake characteristics	Shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours.	Frequency change: $\leq \pm 5\text{ppm}$
4.	Humidity characteristics	+40 $\pm$ 2 $^{\circ}\text{C}$ & 90%~95% R.H. 250 hours	Frequency change: $\leq \pm 5\text{ppm}$
5.	Low temperature characteristics	-40 $\pm$ 2 $^{\circ}\text{C}$, 250 hours, put in room temperature, test after 1 hours.	Frequency change: $\leq \pm 5\text{ppm}$
6.	High temperature characteristics	+85 $\pm$ 2 $^{\circ}\text{C}$, 250 hours, put in room temperature, test after 1 hours.	Frequency change: $\leq \pm 5\text{ppm}$
7.	Temperature cycling	-30 $\pm$ 3 $^{\circ}\text{C}$ /30 $\pm$ 3 min~+85 $\pm$ 2 $^{\circ}\text{C}$ /30 $\pm$ 3min, 5 cycles	Frequency change: $\leq \pm 5\text{ppm}$
8.	Refluence examination	 1- Max 180 sec 2- Max 10 sec 3- Max 80 sec 4- Max 90 sec	Frequency change: $\leq \pm 5\text{ppm}$