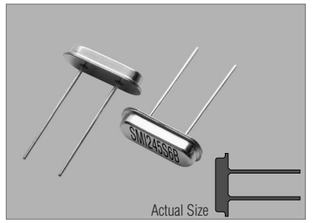
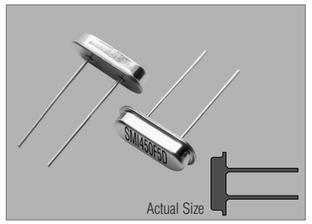
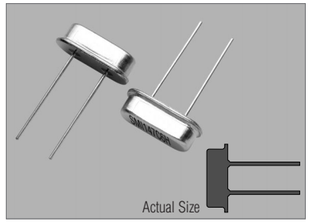
HC-49/U-2H



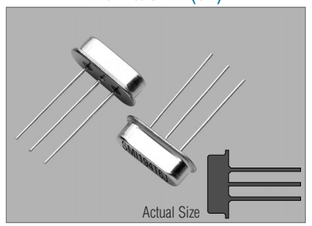
HC-49/U-3H



HC-49/U-4H



HC-49/U-4H(3L)



STANDARD SPECIFICATIONS

1. Package type ..... HC-49/U-2H, HC-49/U-3H, HC-49/U-4H & HC-49/U-4H(3L)
2. Frequency range ..... 3.579545 MHz to 60.000 MHz
3. Frequency tolerance ..... ±50 ppm at +25˚C ±3˚C
4. Temperature stability (referred to +25˚C) ..... ±50 ppm over −20˚C to +70˚C
5. Load capacitance (CL) ..... 16 pF, Typical
6. Shunt capacitance (Co) ..... 7 pF max.
7. Drive level (P) ..... 100 μW max. (10 μW for testing)
8. Aging ..... ± 5 ppm max. at +25˚C ±3˚C per year
9. Cut/Oscillation mode ..... AT−Cut/Fundamental (3.579545 MHz to 40.000 MHz)
   BT−Cut/Fundamental (28.636363 MHz to 50.000 MHz)
   AT−Cut/3rd overtone (26.690000 MHz to 60.000 MHz)

PART NUMBERING GUIDE

4H 080 — 16

Package type — Load capacitance (CL)
Frequency designator

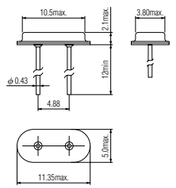
EXAMPLE

SMI PART NO.	Package	Frequency	Circuit Calibration Condition
4H080−16	4H = HC−49/U−4H	080 = 8.000 MHz	Parallel resonance CL = 16 pF
2H221−18	2H = HC−49/U−2H	221 = 22.11840 MHz	Parallel resonance CL = 18 pF
3H450S	3H = HC−49/U−3H	450 = 45.000 MHz	S = Series resonance
4H135-12(3L)	4H(3L) = HC-49/U-4H(3L)	135 = 13.500 MHz	Parallel resonance CL = 12pF
4H100-16TR	4H = HC-49/U-4H on tape and reel (TR)	100 = 10.000 MHz	Parallel resonance CL = 16pF

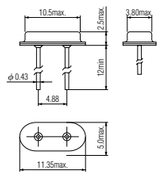
PACKAGE DATA

Item \ Package	HC-49/U-2H	HC-49/U-3H	HC-49/U-4H	HC-49/U-4H(3L)
Cover	Metal	Metal	Metal	Metal
Base	Glass	Glass	Glass	Glass
Sealing	Resistance	Resistance	Resistance	Resistance
Terminal lead	Alloy (FeNiCo)	Alloy (FeNiCo)	Alloy (FeNiCo)	Alloy (FeNiCo)
Terminal plating	SnCu	SnCu	SnCu	SnCu
RoHS	Compliant(Pb-free)	Compliant(Pb-free)	Compliant(Pb-free)	Compliant(Pb-free)

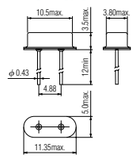
HC-49/U-2H



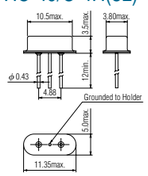
HC-49/U-3H



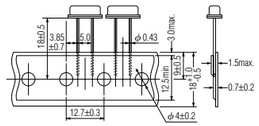
HC-49/U-4H



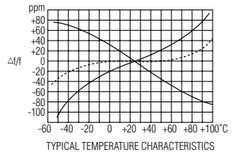
HC-49/U-4H(3L)



HC-49/U-2H, HC-49/U-3H OR HC-49/U-4H ON TAPE(TR)

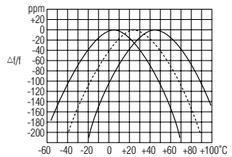


AT-CUT



TYPICAL TEMPERATURE CHARACTERISTICS

BT-CUT



TYPICAL TEMPERATURE CHARACTERISTICS

HC-49/U-2H, HC-49/U-3H & HC-49/U-4H STANDARD FREQUENCIES

FREQUENCY MHz	FREQUENCY DESIGNATOR	MAX EQUIVALENT SERIES RESISTANCE OHMS(Ω) ESR
3.579545	035	200
3.648000	0364	200
3.686400	0368	200
3.840000	0384	200
3.932160	039	200
4.000000	040	150
4.032000	0403	150
4.096000	0409	150
4.194304	041	150
4.433619	044	150
4.500000	045	150
4.608000	046	150
4.800000	048	150
4.906250	04906	150
4.915200	049	150
5.000000	050	120
5.333000	053	120
5.699623	056	120
6.000000	060	100
6.144000	061	100
6.176000	0617	100
6.745800	0674	100
6.764380	0676	100
7.372800	073	80
7.500000	075	80
7.680000	076	80
8.000000	080	80
8.192000	081	80
8.400000	084	80
9.000000	090	60
9.216000	092	60
9.600000	096	60
9.830400	098	60
9.843750	0984	60
10.000000	100	60
10.368000	103	60
10.202000	102	60
10.245000	10245	60
11.000000	110	60
11.059200	1105	60
12.000000	120	60
12.288000	122	60
12.296000	1229	60
13.000000	130	50
13.248000	132	50
13.500000	135	50
14.000000	140	50
14.318180	143	50
14.400000	144	50
14.745600	147	50
15.000000	150	50
15.360000	153	50
16.000000	160	50
16.384000	163	50
17.700000	177	50
17.734475	1773	50
18.000000	180	50
18.432000	184	50
19.069929	1906	50
19.312000	193	50
19.440000	194	50
19.660800	196	50
20.000000	200	40
20.480000	204	40
22.118400	221	40
23.000000	230	40
24.000000	240	40
24.576000	245	40
25.000000	250	40
26.540000	265	40
27.000000	270	40
27.586000	275	40
28.000000	280	40
28.636363	2863	40
29.000000	290	40
29.491200	294	40
30.000000	300	40
30.800000	308	40
32.000000	320	40
33.000000	330	40
33.333000	333	40
33.868800	338	40
35.468950	354	40
36.000000	360	40
36.864000	368	40
37.745000	377	40
38.000000	380	40
40.000000	400	40
45.000000	450	40 (BT-Cut)
48.000000	480	40 (BT-Cut)
50.000000	500	40 (BT-Cut)