

### ● FEATURES

- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU'S
- WIDE FREQUENCY RANGE
- INDUSTRY STANDARD PACKAGES

**SERIES A, B, C**  
**HC-49/U, HC-51/U, AND UM-1**

### ● SPECIFICATIONS

FREQUENCY RANGE		100.00 KHz TO 300.00 MHz
HOLDER TYPES	A: HC-49/U	1.00 MHz TO 300.00 MHz
	B: HC-51/U	100.00 KHz TO 4.00 MHz
	C: UM-1	8.00 MHz TO 300.00 MHz
FREQUENCY TOLERANCE AT 25°C		±30 PPM TYPICAL ±50 PPM MAXIMUM
FREQUENCY STABILITY OVER TEMPERATURE		±50 PPM TYPICAL ±100 PPM MAXIMUM
OPERATING TEMPERATURE RANGE		-20° C TO +70° C STANDARD
		-40° C TO +85° C EXTENDED
STORAGE TEMPERATURE RANGE		-55° C TO +125° C
AGING		±5 PPM PER YEAR MAXIMUM
LOAD CAPACITANCE		10 TO 32 pF OR SERIES
SHUNT CAPACITANCE		7 pF MAXIMUM
EQUIVALENT SERIES RESISTANCE (ESR)		SEE PAGE 3
DRIVE LEVEL		0.1 mW TYPICAL 1 mW MAXIMUM
SHOCK RESISTANCE		±5 PPM MAXIMUM 75 cm DROP TEST IN 3 AXES ONTO A HARD SURFACE OR 1000 g's x 0.5 ms x ½ SINEWAVE IN 3 AXES



### ● FREQUENCY RANGE AND MODE OF OSCILLATION BY HOLDER TYPE

HOLDER TYPE	FUNDAMENTAL (FUND)	THIRD OVERTONE (3OT)	FIFTH OVERTONE (5OT)	SEVENTH OVERTONE (7OT)	NINTH OVERTONE (9OT)
TYPE A: HC-49/U	1.00 MHz TO 65.00 MHz	20.00 MHz TO 90.00 MHz	60.00 MHz TO 130.00 MHz	125.00 MHz TO 200.00 MHz	180.00 MHz TO 300.00 MHz
TYPE B: HC-51/U	100.00 KHz TO 4.00 MHz				
TYPE C: UM-1	8.00 MHz TO 65.00 MHz	25.00 MHz TO 90.00 MHz	60.00 MHz TO 130.00 MHz	125.00 MHz TO 200.00 MHz	180.00 MHz TO 300.00 MHz

### ● PART NUMBERING SYSTEM

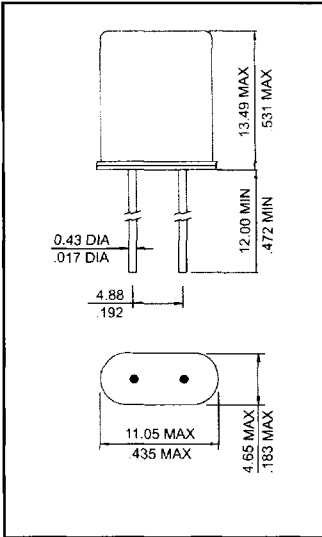
HOLDER TYPE		FREQUENCY	LOAD CAPACITANCE	MODE		EXTENDED TEMPERATURE
A B C	HC-49/U HC-51/U UM-1	IN MHz	10 TO 32pF FOR PARALLEL S FOR SERIES	FUND 3OT 5OT 7OT 9OT	FUNDAMENTAL† THIRD OVERTONE FIFTH OVERTONE SEVENTH OVERTONE NINTH OVERTONE	EXT
MECHANICAL OPTIONS				TAPE AND REEL		
THREE PIN BASE	THIRD LEAD (TOP OF HOUSING)	SPACER	SLEEVE	T		
3PIN	3RD	SP	SL			

† FUNDAMENTAL MODE NOT NEEDED IN PART NUMBER

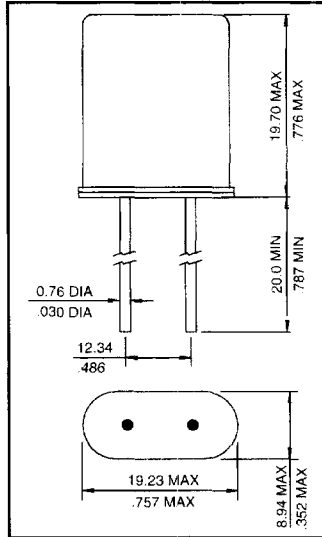
EXAMPLE: A-4.000-S

A-3.579545-18-EXT-3PIN-SP-SL-T

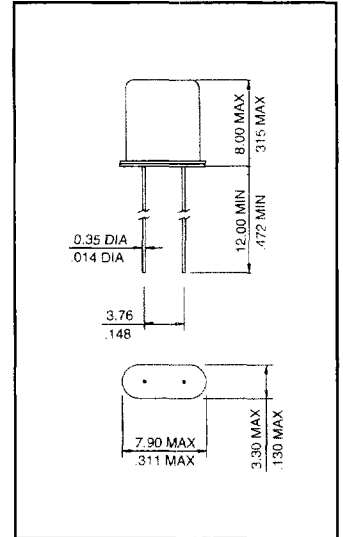
C-65.000-S-30T



**TYPE A (HC-49/U)**



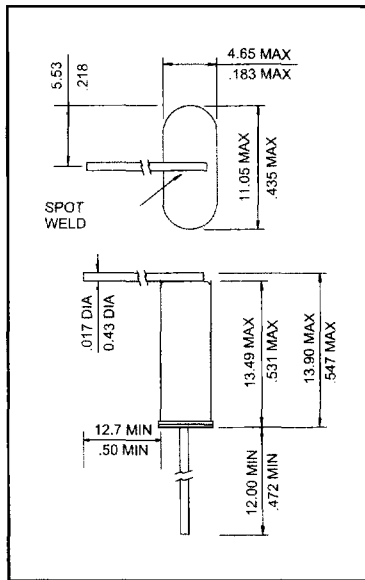
**TYPE B (HC-51/U)**



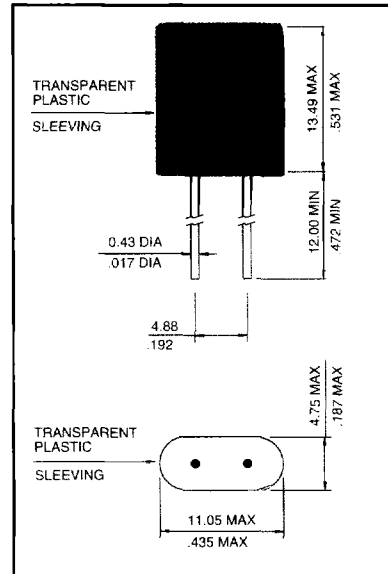
**TYPE C (UM-1)**

● **PACKAGE OPTIONS**

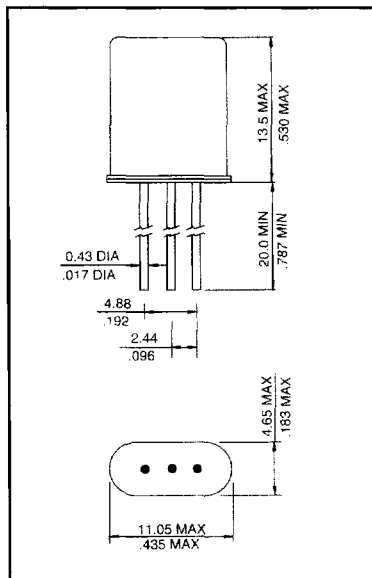
Scale none Dimension in  $\frac{mm}{inch}$



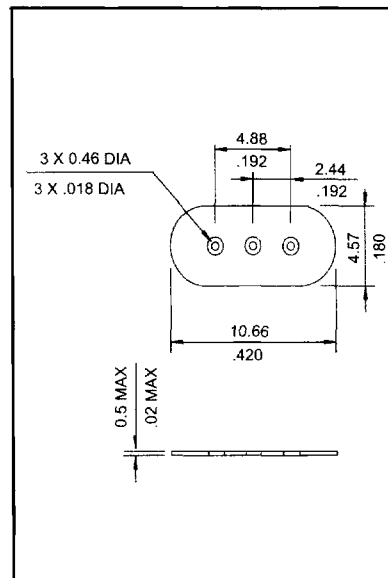
**THIRD LEAD OPTION: 3RD**



**PLASTIC SLEEVE OPTION: SL**



**3 LEAD BASE OPTION: 3PIN**



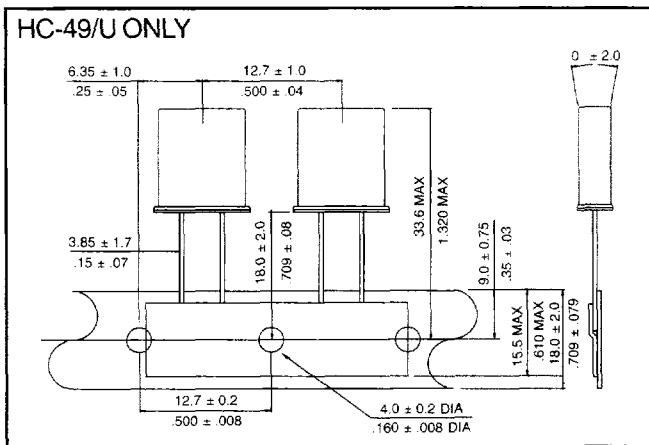
**PLASTIC SPACER OPTION: SP**

## ● EQUIVALENT SERIES RESISTANCE VERSUS FREQUENCY AND PACKAGE

FREQUENCY MHz	HOLDER TYPE			MAXIMUM EQUIVALENT SERIES RESISTANCE (OHMS)		
	HC-51/U "B"	HC-49/U "A"	UM-1 "C"	"B"	"A"	"C"
1.00	B	A		700	700	
1.8432	B	A		600	700	
2.00	B	A		500	500	
2.097152	B	A		500	500	
2.4576	B	A		400	400	
3.00	B	A		150	200	
3.2768	B	A		150	180	
3.579545	B	A		120	180	250
3.6	B	A		100	180	250
3.6864	B	A		100	160	250
4.00	B	A		50	100	250
4.096		A			100	220
4.194304		A			100	200
4.433619		A			80	150
4.9152		A			70	120
5.00		A			70	110
5.0688		A			70	100
5.185		A			70	100
5.7143		A			60	100
5.9904		A			60	90
6.00		A			60	90
6.144		A			50	90
6.4		A			50	80
6.5536		A			50	80
7.00		A			40	70
7.15909		A			40	70
7.3728		A			40	70
8.00		A			35	60
9.216		A			35	60
9.8304		A			35	60
10.00		A	C		30	50
10.738635		A	C		30	50
11.00		A	C		30	50
11.05		A	C		30	50

FREQUENCY MHz	HOLDER TYPE			MAXIMUM EQUIVALENT SERIES RESISTANCE (OHMS)		
	HC-51/U "B"	HC-49/U "A"	UM-1 "C"	"B"	"A"	"C"
11.0592		A	C		30	50
12.00		A	C		30	40
12.288		A	C		30	40
13.5168		A	C		25	40
14.31818		A	C		25	35
14.7456		A	C		25	35
15.00		A	C		25	35
16.00		A	C		25	35
16.384		A	C		25	35
17.36		A	C		25	30
18.00		A	C		20	30
18.432		A	C		20	30
19.354		A	C		20	30
19.6608		A	C		20	30
20.00		A	C		20	30
22.1184		A	C		20	25
23.4		A	C		20	25
24.00		A	C		20	25
24.576		A	C		40	25
25.00		A	C		40	25
27.00		A	C		40	80
30.00		A	C		40	70
32.00		A	C		40	70
36.00		A	C		40	60
40.00		A	C		40	60
48.00		A	C		40	60
60.00		A	C		40	50
70.00		A	C		35	40
80.00		A	C		35	40
90.00		A	C		60	40
100.00		A	C		60	100
150.00		A	C		65	80
200.00		A	C		120	175
300.00		A	C		160	180

## ● CARRIER TAPE DIMENSIONS



## ● PACKAGING

370 mm REEL DIAMETER, 18 mm TAPE WIDTH, 12.7 mm PITCH, QUANTITY 1000 PIECES PER REEL