

FEATURES Crystals / Quarze HC-49/U

- HIGH RELIABILITY FOR LOW COST
- EXTENDED TEMPERATURE RANGE TO -40/+125°C
- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU'S
- QUALIFIED FOR QUOTMOTIVE APPLICATIONS



TYPE		HC-49/U				
NUMBER OF LEADS	STANDARD	2 LEADS				
	OPTION	3 LEADS				
SMD-VERSION		AVAILABLE WITH BENT LEADS AND METAL JACKET				
PACKAGE HEIGHT	STANDARD	13.46 MM				
	OPTION	10.7 MM				
FREQUENCY		1.8432 ~ 40.000 MHz	20.0 ~ 40.0 MHz	23.0 ~ 100.0 MHz	60.0 ~ 150.0 MHz	120.0 ~ 200.0 MHz
MODE OF VIBRATION		AT-FUNDAMENTAL	BT-FUNDAMENTAL	3rd OVERTONE	5th OVERTONE	7th OVERTONE
RESONANCE RESISTANCE		800 ~ 20 Ω MAX.	30 Ω MAX.	80 Ω MAX.	80 Ω MAX.	100 Ω MAX.
FREQUENCY TOLERANCE AT 25°C		+10 PPM ~ +50 PPM				
TEMPERATURE RANGE		0/+50°C ~ -40/+125°C				
TEMPERATURE STABILITY	+3 PPM	0+50°C				
	+5 PPM	0+50°C / -10/+60°C / 0/+70°C -20/+70°C				
	+10 PPM	0+50°C / -10/+60°C / 0/+70°C / -20/+70°C				
	+15 PPM	0+50°C / -10/+60°C / 0/+70°C / -20/+70°C / -40/+85°C				
	+20 PPM	0+50°C / -10/+60°C / 0/+70°C / -20/+70°C / -40/+85°C				
	+30 PPM	0+50°C / -10/+60°C / 0/+70°C / -20/+70°C / -40/+85°C				
	+50 PPM	0+50°C / -10/+60°C / 0/+70°C / -20/+70°C / -40/+85°C / -40/+125°C				
	+100 PPM	0+50°C / -10/+60°C / 0/+70°C / -20/+70°C / -40/+85°C / -40/+125°C				
LOAD CAPACITANCE		8 ~ 50 PF OR SERIES				
SHUNT CAPACITANCE		7 PF MAX.				
DRIVE LEVEL		100 µW typical (0.01 mW ~ 2 mW possible)				
AGING		+3 ~ +5 PPM PER YEAR				
INSULATION RESISTANCE		>500 MΩ DC/100V +10%				
STORAGE TEMPERATURE		-55/+125°C				
DELIVERY FORM FOR LEADED VERSION	STANDARD	BULKS				
	OPTION	TAPE AND REEL (1.000 PCS PER REEL)				
DELIVERY FORM FOR SMD-VERSION		TAPE AND REEL				
INSULATOR FOR LEADED VERSION	STANDARD	WITHOUT INSULATOR				
	OPTION	WITH INSULATOR				
CUTTED LEADS		AVAILABLE ON REQUEST				

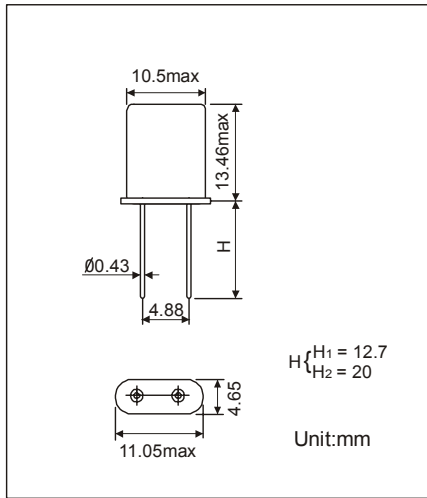
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION

PART NUMBERING SYSTEM

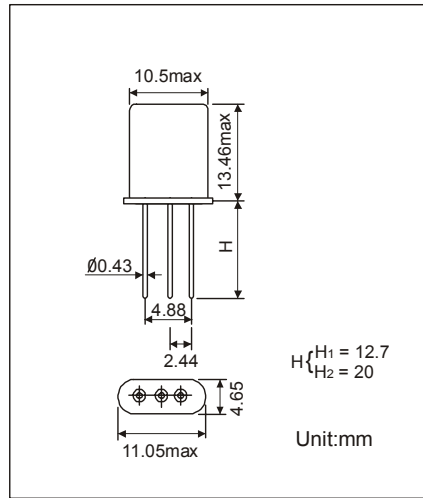
EXAMPLE	HC-49/U 27.000 MHz 30/50/-40+125/20pF/T/I
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TYPE	HC-49/U FOR TYPE WITH 2 LEADS
	HC-49/3U FOR TYPE WITH 3 LEADS
	HC-49/U-SMD FOR SMD-VERSION
PACKAGE HEIGHT	BLANK FOR 13.46 MM
	10.7 FOR 10.7 MM
FREQUENCY	REQUIRED VALUE
FREQUENCY TOL. AT 25°C	REQUIRED VALUE
TEMPERATURE STABILITY	REQUIRED VALUE
TEMPERATURE RANGE	REQUIRED VALUE
LOAD CAPACITANCE	REQUIRED VALUE
DELIVERY FORM	BLANK FOR BULKS
	T FOR TAPE AND REEL
INSULATOR	BLANK = WITHOUT INSULATOR
	I = WITH INSULATOR

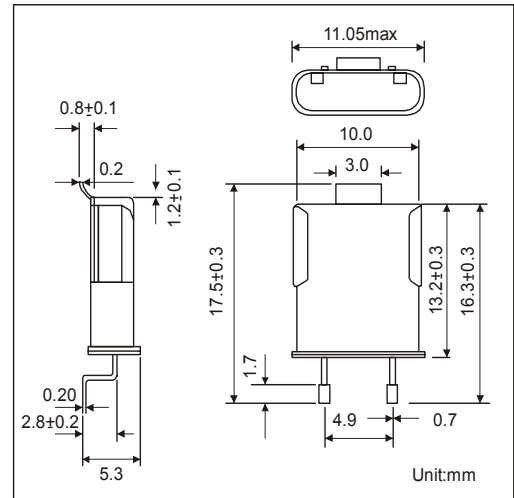
OUTLINE DRAWING OF HC-49/U



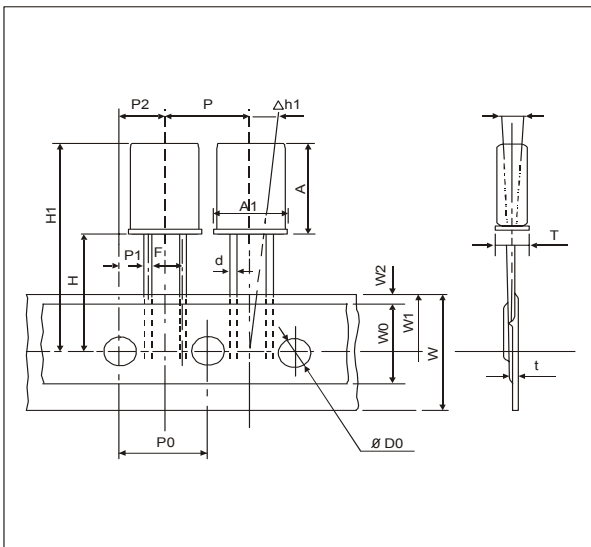
OUTLINE DRAWING OF HC-49/3U



OUTLINE DRAWING OF HC-49/U-SMD



REEL SPECIFICATION (LEADED VERSION)



Description	Symbol	Dimensions
Outside Diameter of Part	AxA1	13.5x11.1
Thickness of Part	T	5.0max
Lead Wire Diameter	d	Ø0.43 ^{+0.05} / _{-0.02}
Interval Spacing of Part	P	12.7±1.0
Pitch fo Leading Hole	P0	12.7±1.0
Tolerance of Leading Hole	P1	3.85±0.7
	P2	6.35±1.0
Lead Pitch	F	5.0 ^{+0.5} / _{-0.2}
Inclination	Δ h	0±1.0
Tape Width	W	18.2±0.2
Adhesive Tape Width	W0	13.0 ^{+0.8} / _{-0.2}
Tolerance of Leading Hole (Vertical)	W1	8.5±0.3
Tolerance of Cover Tape	W2	2.0max
Bottom Surface Position of Part	H	18.2±0.2
Top Surface Position of Part	H1	33.6max
Hole Diameter	D0	Ø4.0±0.2
Tape Thickness	t	0.7±0.1
Inclination	Δ h1	0±1.0

Unit:mm

REEL SPECIFICATION FOR SMD VERSION

