

LOW PROFILE MICROPROCESSOR CRYSTALS

● FEATURES

- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU's
- 3.5 mm MAXIMUM HEIGHT
- AVAILABLE IN EXTENDED TEMPERATURE RANGE
- SAME PIN LAYOUT AS HC-49/U

SERIES AS (HC-49/S)



● SPECIFICATIONS

FREQUENCY RANGE		3.20 MHz TO 70.00 MHz
MODE OF OSCILLATION	FUNDAMENTAL	3.20 MHz TO 40.320 MHz
	THIRD OVERTONE	24.576 MHz TO 70.00 MHz
FREQUENCY TOLERANCE AT 25°C		±30 PPM TYPICAL ±50 PPM MAXIMUM
FREQUENCY STABILITY OVER TEMPERATURE RANGE		±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 pF TO 32 pF OR SERIES
EQUIVALENT SERIES RESISTANCE (ESR)		SEE TABLE
DRIVE LEVEL		0.1 mW TYPICAL
CRYSTAL CUT		AT STRIP



● TYPICAL FREQUENCIES AND ESR CHARACTERISTICS

FREQUENCY (MHz)	ESR MAX (OHM)	MODE	FREQUENCY (MHz)	ESR MAX (OHM)	MODE	FREQUENCY (MHz)	ESR MAX (OHM)	MODE	FREQUENCY (MHz)	ESR MAX (OHM)	MODE
3.579545	180	FUND	8.064	60	FUND	14.7456	50	FUND	47.92	70	3OT
3.6864	150	FUND	8.192	60	FUND	16.00	40	FUND	48.00	70	3OT
4.00	130	FUND	8.6436	60	FUND	16.000312	40	FUND	50.688	70	3OT
4.032	130	FUND	9.60	60	FUND	16.384	40	FUND	52.416	70	3OT
4.096	130	FUND	9.8304	60	FUND	19.6608	40	FUND	56.448	70	3OT
4.194304	130	FUND	10.00	50	FUND	20.00	40	FUND	60	70	3OT
4.433619	130	FUND	10.24	50	FUND	24.00	40	FUND	70.00	70	3OT
4.9152	130	FUND	10.244	50	FUND	24.576	40/80	FUND/3OT			
5.0688	100	FUND	10.245	50	FUND	27.00	40/80	FUND/3OT			
6.00	80	FUND	11.00	50	FUND	28.63636	40/80	FUND/3OT			
6.144	80	FUND	11.0592	50	FUND	29.00	40/70	FUND/3OT			
6.176	80	FUND	11.2896	50	FUND	32.00	40/70	FUND/3OT			
7.15909	70	FUND	12.00	50	FUND	32.768	40/70	FUND/3OT			
7.3728	70	FUND	12.288	50	FUND	36.00	40/70	FUND/3OT			
7.680	70	FUND	12.80	50	FUND	40.00	40/70	FUND/3OT			
8.00	60	FUND	14.31818	50	FUND	40.320	40/70	FUND/3OT			

OTHER FREQUENCIES ARE AVAILABLE

● PART NUMBERING SYSTEM

HOLDER TYPE		FREQUENCY	LOAD CAPACITANCE	MODE*
AS	HC-49 SHORT	IN MHz	10 TO 32 pF FOR PARALLEL S FOR SERIES	F 3OT FUNDAMENTAL THIRD OVERTONE

TOLERANCE/STABILITY**	EXTENDED TEMPERATURE	MECHANICAL OPTIONS		HEIGHT**			TAPE AND REEL
(PPM/PPM) EXAMPLES: 1020, 1010	EXT	3PIN SP	THREE PIN BASE SPACER	STD H32 H30 H25	4.6 mm (STANDARD) 3.2 mm (CUSTOM) 3.0 mm (CUSTOM) 2.5 mm (CUSTOM)		TR

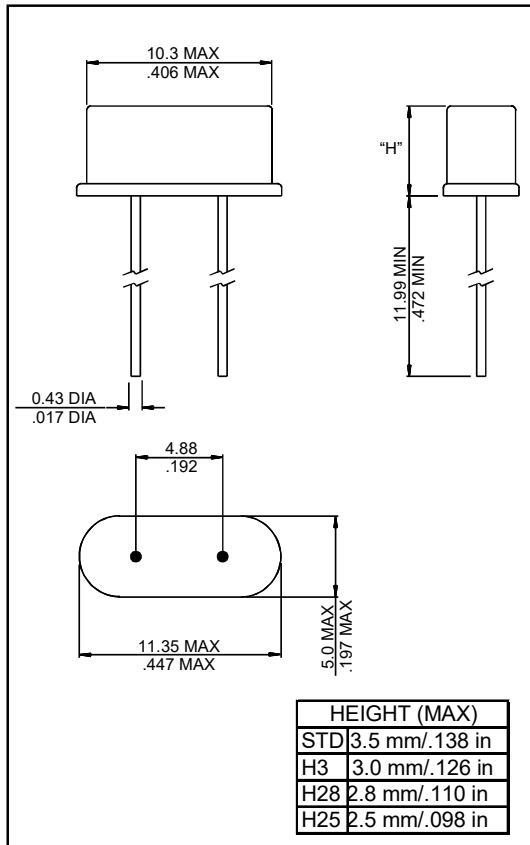
* ONLY FOR FREQUENCIES OVER 24.576 MHz ** INCLUDED IN THE PART NUMBER ONLY IF DIFFERENT FROM THE STANDARD.

EXAMPLES: AS-10.000-20-F-3PIN-TR, AS-32.000-18-3OT-1010-EXT-SP-H30-TR

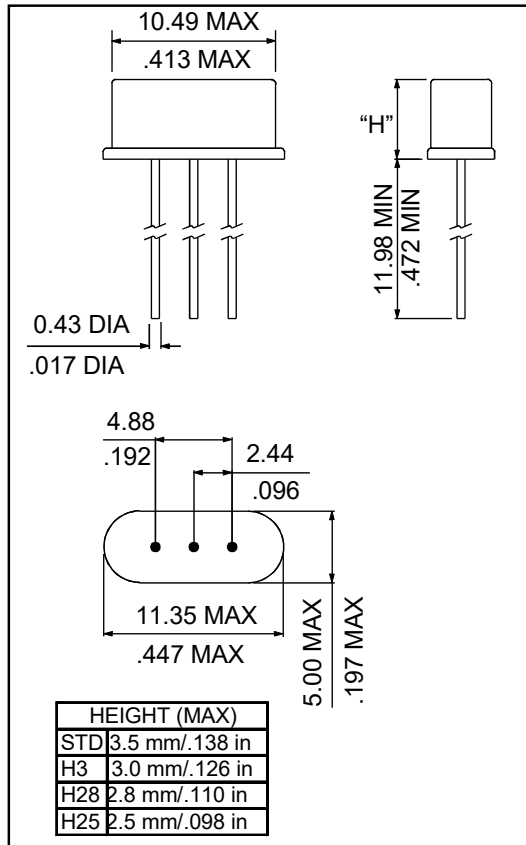
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OUTLINE DRAWINGS

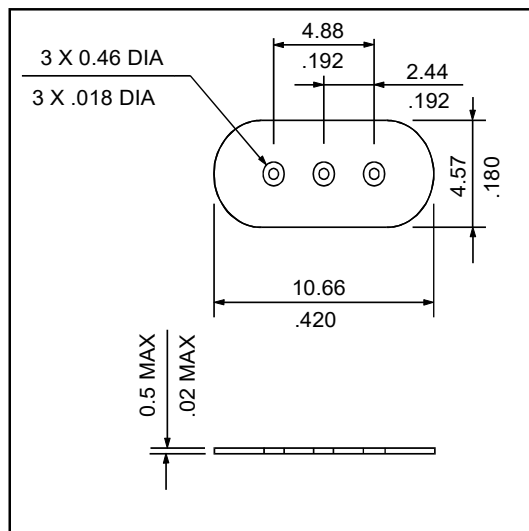
SERIES AS HC-49/S



TYPE AS (HC-49/S)



TYPE AS-3PIN (HC-49/S CENTER GROUND PIN)
OPTION: 3-PIN



PLASTIC SPACER
OPTION: SP