MICROPROCESSOR CRYSTAL HC-49/US LOW PROFILE

SERIES AS-SMD

FEATURES

- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU's
- AVAILABLE IN EXTENDED TEMPERATURE RANGE
- LOW PROFILE SURFACE MOUNT

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
REFLOW CONDITIONS		260° C FOR 10 s MAXIMUM



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	47.920	70	3OT
3.6864	150	FUND	8.192	60	FUND	16.000	40	FUND	48.000	70	3OT
4.000	130	FUND	8.6436	60	FUND	16.000312	40	FUND	50.688	70	3OT
4.032	130	FUND	9.600	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	10.000	50	FUND	20.000	40	FUND	60.000	70	3OT
4.433619	130	FUND	10.240	50	FUND	24.000	40	FUND	70.000	70	3OT
4.9152	130	FUND	10.244	50	FUND	24.576	40/80	FUND/3OT			
5.0688	100	FUND	10.245	50	FUND	27.000	40/80	FUND/3OT			
6.000	80	FUND	11.000	50	FUND	28.63636	40/80	FUND/3OT			
6.144	80	FUND	11.0592	50	FUND	29.000	40/70	FUND/3OT			
6.176	80	FUND	11.2896	50	FUND	32.000	40/70	FUND/3OT			
7.15909	70	FUND	12.000	50	FUND	32.768	40/70	FUND/3OT			
7.3728	70	FUND	12.288	50	FUND	36.000	40/70	FUND/3OT			
7.680	70	FUND	12.800	50	FUND	40.000	40/70	FUND/3OT			
8.000	60	FUND	14.31818	50	FUND	40.320	40/70	FUND/3OT			

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	-	CONFIGURATION		-	HEIGHT**		-	TAPE AND REEL
(PPM/PPM) EXAMPLES: 1020, 1010		EXT		SMD	SMD TYPE		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

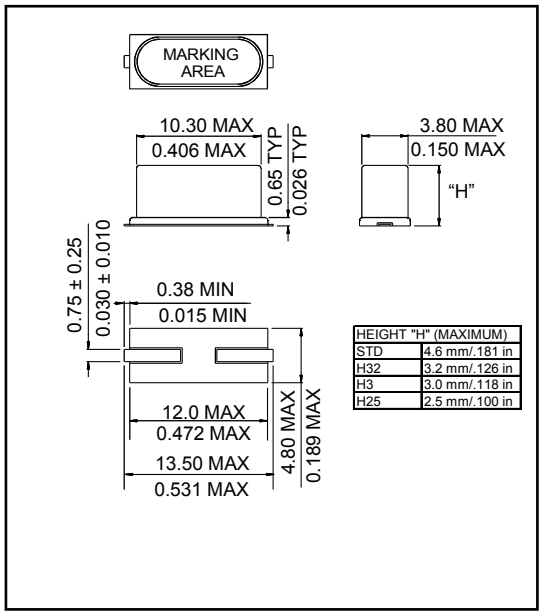
** INCLUDED IN THE PART NUMBER ONLY IF DIFFERENT FROM THE STANDARD.

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

NOTE: QUANTITIES UNDER 1,000 PIECES ARE SHIPPED IN BULK.

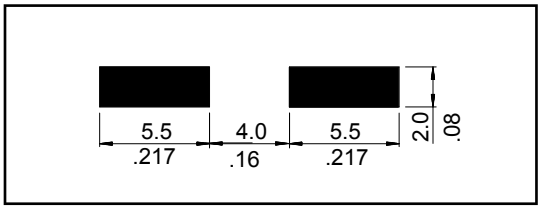
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OUTLINE DRAWING



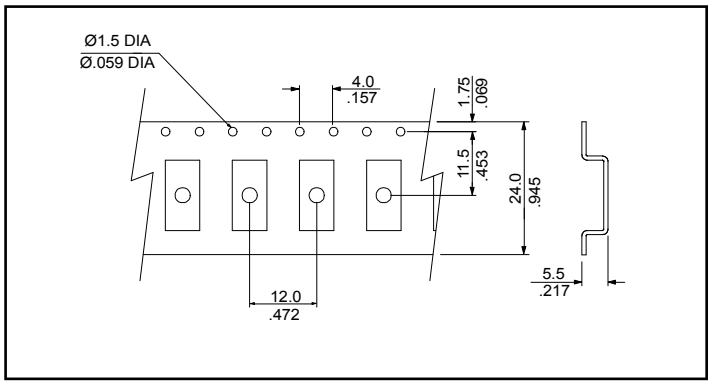
HEIGHT "H" (MAXIMUM)	
STD	4.6 mm/.181 in
H32	3.2 mm/.126 in
H3	3.0 mm/.118 in
H25	2.5 mm/.100 in

RECOMMENDED SOLDER PATTERN

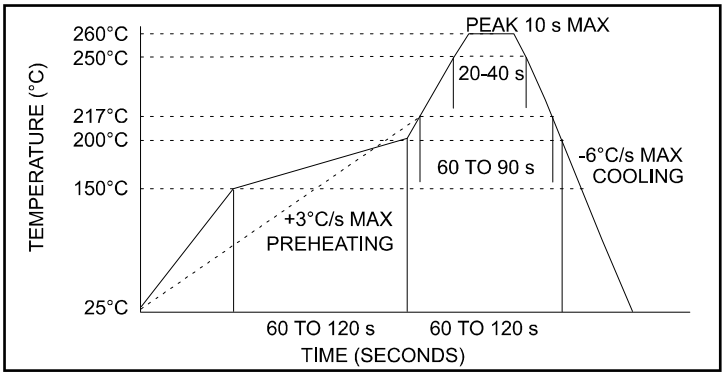


CARRIER TAPE DIMENSIONS

330 mm REEL DIAMETER
24 mm TAPE WIDTH
12 mm PITCH
1000 PIECES PER REEL



REFLOW SOLDERING PROFILE



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