

FEATURES

- ISO/TS 16949 CERTIFIED FACILITY
- RELIABILITY TESTING PER AEC-Q200
- PPAP DOCUMENTATION AVAILABLE
- EXCELLENT TOLERANCE AND STABILITY
- CUSTOM SPECIFICATIONS AVAILABLE



SPECIFICATIONS

PARAMETER		VALUE
FREQUENCY RANGE		3.000 MHz to 80.000 MHz
MODE OF OSCILLATION	FUNDAMENTAL	3.000 MHz to 48.000 MHz
	THIRD OVERTONE	30.000 MHz to 80.000 MHz
FREQUENCY TOLERANCE AT 25°C		±50 ppm max (±10 ppm, ±15 ppm, ±20 ppm and ±30 ppm available)
FREQUENCY STABILITY OVER TEMPERATURE ‡		±50 ppm max (±10 ppm, ±15 ppm, ±20 ppm and ±30 ppm available, see Table 2)
OPERATING TEMPERATURE RANGE ‡		-20°C to +70°C Standard -40°C to +85°C Extended -40°C to +105°C Extended6
STORAGE TEMPERATURE RANGE		-55°C to +125°C
AGING		±3 ppm per year max
LOAD CAPACITANCE		8 pF to 32 pF or Series
EQUIVALENT SERIES RESISTANCE		See Table 1
SHUNT CAPACITANCE		7.0 pF max
DRIVE LEVEL		100 µW typ, 500 µW max
INSULATION RESISTANCE		500 MΩ min
SHOCK RESISTANCE		±5 ppm max 75 cm drop test in 3 axes onto a hard wood surface
REFLOW CONDITIONS		260°C for 10 s max



‡ Not all combinations of temperature and frequency stability available, consult factory.

TABLE 1

FREQUENCY (MHz)	MODE	ESR MAX (Ω)
3 ≤ F0 < 4	FUND	150
4 ≤ F0 < 6	FUND	100
6 ≤ F0 < 10	FUND	70
10 ≤ F0 < 12	FUND	60
12 ≤ F0 < 16	FUND	50
16 ≤ F0 < 24	FUND	40
24 ≤ F0 < 30	FUND	30
30 ≤ F0 ≤ 48	FUND	20
30 ≤ F0 < 36	3OT	80
36 ≤ F0 ≤ 80	3OT	60

TABLE 2

TEMP RANGE (°C)	STABILITY (ppm)				
	±10	±15	±20	±30	±50
-20 to +70	O	O	O	O	O
-40 to +85	×	△	△	O	O
-40 to +105	×	×	×	×	O

Note: O: Available, △: Conditional, ×: Not available



■ PART NUMBERING SYSTEM

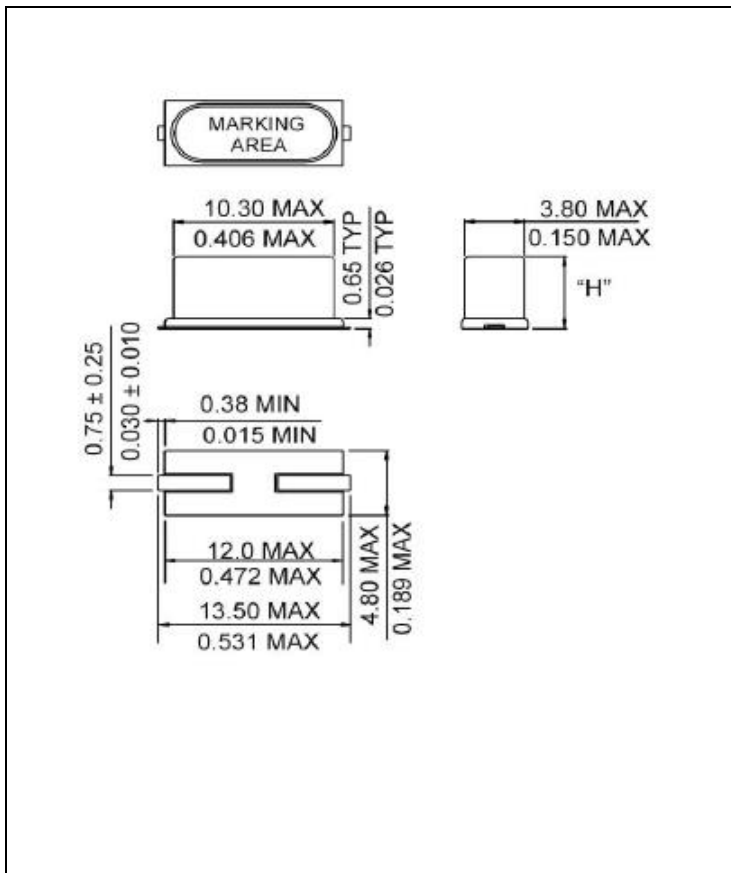
TYPE	FREQUENCY	LOAD CAPACITANCE	MODE	TOLERANCE/STABILITY (PPM/PPM)
ASA	in MHz	8 to 32 pF for Parallel S for Series	Blank for < 24.576 MHz F for ≥ 24.576 MHz	Blank for max ppmppm Example: 1020, 2050

EXTENDED TEMPERATURE	CONFIGURATION	TAPE & REEL
Blank for Standard EXT for Extended EXT6 for Extended6	SMD	TR

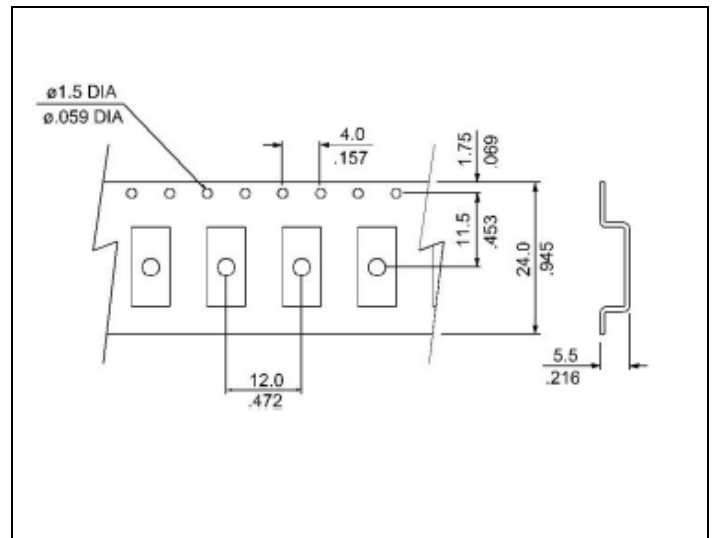
EXAMPLE: ASA-24.000-18-3050-EXT-SMD-TR

AUTOMOTIVE GRADE Surface Mount Microprocessor Crystal, HC-49S SMD package, 24.000 MHz, Fundamental mode, 18 pF Load, ±30 ppm Tolerance, ±50 ppm Stability from -40°C to +85°C, Tape and Reel packaging

■ MECHANICAL SPECIFICATION



■ CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR NON-SPECIFIED DIMENSIONS

■ PACKAGING

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