

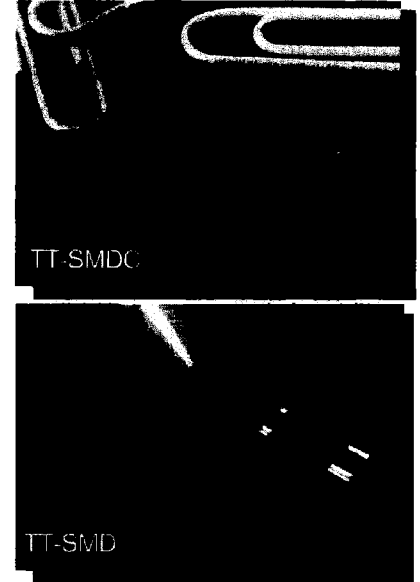
● FEATURES

- AT CUT CRYSTAL PERFORMANCE
- THERMOPLASTIC PACKAGE SUITED FOR REFLOW SOLDERING
- EXCELLENT FOR HIGH DENSITY CIRCUIT BOARDS

SERIES TT-SMD AND TT-SMDC

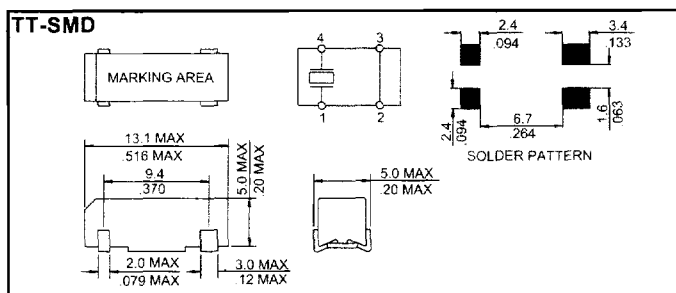
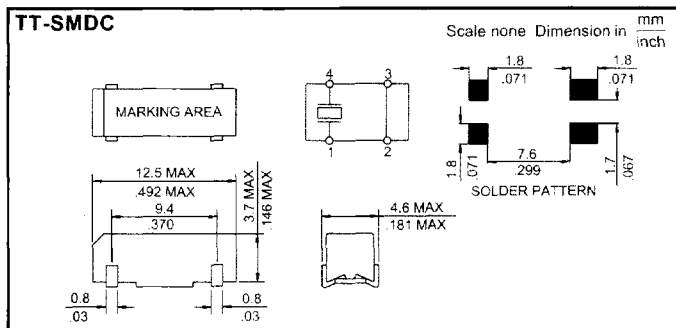
● SPECIFICATIONS

MODEL TYPE	TT-SMD	TT-SMDC
FREQUENCY RANGE	3.579545 MHz TO 90.00 MHz	3.579545 MHz TO 70.00 MHz
MODE OF OSCILLATION	FUNDAMENTAL	3.579545 MHz TO 30.00 MHz
	THIRD OVERTONE	30.10 MHz TO 90.00 MHz
FREQUENCY TOLERANCE AT 25°C	±50 PPM MAXIMUM (±30 PPM AVAILABLE)	
FREQUENCY STABILITY OVER TEMPERATURE	±50 PPM MAXIMUM (±30 PPM AVAILABLE)	
OPERATING TEMPERATURE RANGE	-10 °C TO +60 °C	
EXTENDED TEMPERATURE RANGE	-40°C TO +85°C	NOT AVAILABLE
STORAGE TEMPERATURE RANGE	-55°C TO +125°C	
LOAD CAPACITANCE	12 pF TO 32 pF OR SERIES	
SHUNT CAPACITANCE	7 pF MAXIMUM	7 pF MAXIMUM
EQUIVALENT SERIES RESISTANCE (ESR)	SEE TABLE 1	
DRIVE LEVEL	100 µW MAXIMUM	
SHOCK RESISTANCE	±5 PPM MAXIMUM 75 cm DROP TEST IN 3 AXES ONTO A HARD SURFACE OR 3000 g / 0.3 ms x ½ SINEWAVE IN 3 AXES	
REFLOW CONDITION	260°C FOR 10 s MAXIMUM	240°C FOR 10 s MAXIMUM



FREQUENCY (MHz)	MODE	MAXIMUM ESR (OHM)
3.50 TO 3.999	FUNDAMENTAL	200
4.00 TO 5.999	FUNDAMENTAL	150
6.00 TO 9.999	FUNDAMENTAL	100
10.00 TO 30.00	FUNDAMENTAL	50
30.10 TO 90.00	THIRD OVERTONE	100

● OUTLINE DRAWINGS

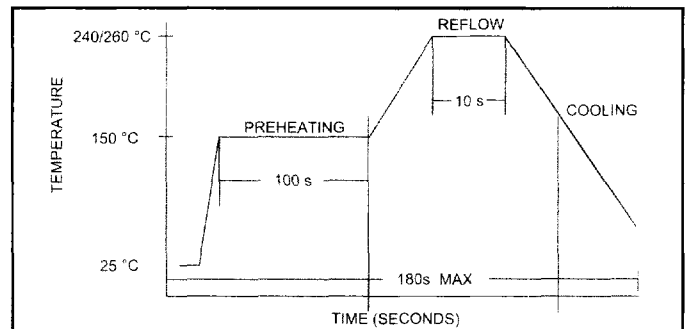


● PART NUMBERING SYSTEM

HOLDER TYPE	FREQUENCY	LOAD CAPACITANCE	MODE		EXTENDED TEMPERATURE	TAPE AND REEL
			FUND 3OT	FUNDAMENTAL THIRD OVERTONE		
TT-SMD TT-SMDC	IN MHZ	12 TO 32 pF FOR PARALLEL S FOR SERIES			EXT (TT-SMD ONLY)	T

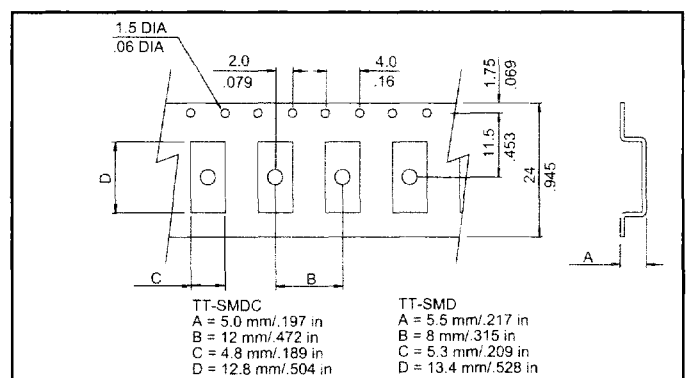
EXAMPLE: TT-SMDC- 12.288-22-T, TT-SMD- 32.768-16-30T-EXT-T

● REFLOW SOLDERING PROFILE



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● CARRIER TAPE DIMENSIONS



● PACKAGING

330 mm (TT-SMDC) 300 mm (TT-SMD) REEL DIAMETER, 24mm TAPE WIDTH. QUANTITY: 1000 PIECES PER REEL