

● **FEATURES**

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



● **SPECIFICATIONS**

PARAMETER		VALUE
FREQUENCY RANGE		3.579545 MHz ~ 70.000 MHz
MODE OF OSCILLATION	FUNDAMENTAL	3.579545 MHz ~ 30.000 MHz
	THIRD OVERTONE	30.100 MHz ~ 70.000 MHz
FREQUENCY TOLERANCE AT 25°C		±50 ppm max (±30 Available)
FREQUENCY STABILITY OVER TEMPERATURE		±50 ppm max (±30 Available)
TEMPERATURE RANGE	STANDARD	-10°C ~ +60°C
	EXTENDED	-40°C ~ +85°C
LOAD CAPACITANCE		12 pF to 32 pF or Series
SHUNT CAPACITANCE		7.0 pF max
EQUIVALENT SERIES RESISTANCE (ESR)		See Table 1
DRIVE LEVEL		100 µW max
SHOCK RESISTANCE		±5 ppm max 75 cm drop test in 3 axes onto a wood surface
REFLOW CONDITIONS		260°C for 10s max



TABLE 1

FREQUENCY (MHz)	MODE	MAX ESR (Ω)
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 90.000	Third Overtone	100

● **PART NUMBERING SYSTEM**

HOLDER TYPE	-	FREQUENCY	-	LOAD CAPACITANCE	-	MODE	-	TOLERANCE/STABILITY (PPMPPM)
TT-SMDC	-	In MHz	-	10 to 32 pF for Parallel S for Series	-	Blank for < 24.576 MHz F for ≥ 24.576 MHz 3OT Third Overtone	-	Blank for Maximum ppm for Other Example 3050, 2050

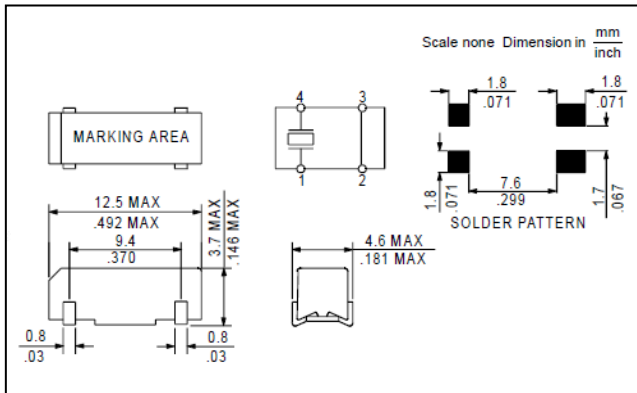
-	EXTENDED TEMPERATURE	-	TAPE & REEL
-	Blank for Standard EXT for Extended	-	TR

Example:

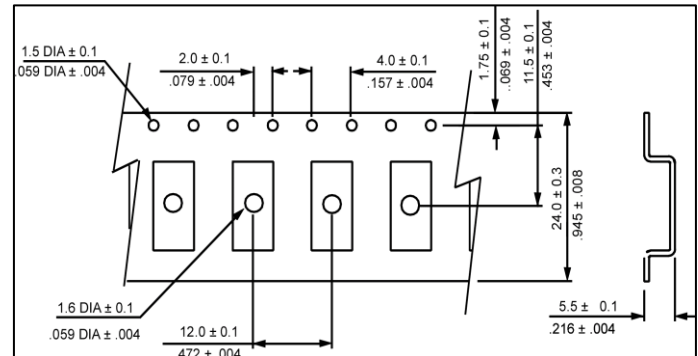
TT-SMDC-12.000-18-3050-EXT-TR

SERIES TT-SMDC

● **OUTLINE DRAWINGS**



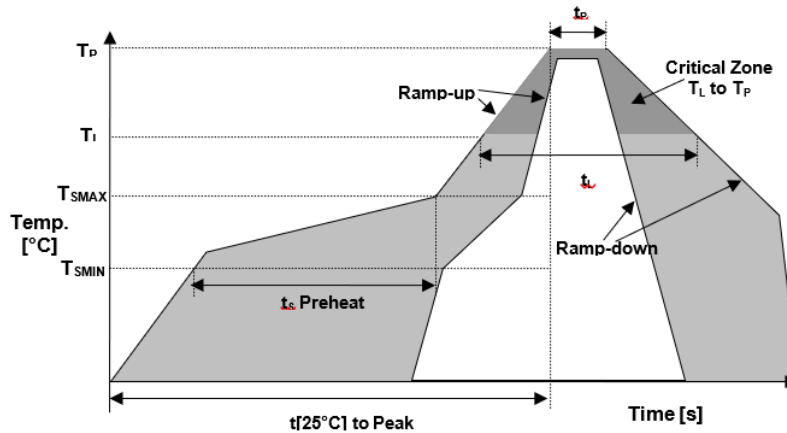
● **CARRIER TAPE DIMENSIONS**



● **PACKAGING**

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

● **REFLOW SOLDERING PROFILE**



Reflow profile		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_s	60-180 s
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/s max.
Ramp-down rate	R_{DOWN}	6°C/s max.
Time within 5°C of Peak Temperature	t_P	10 s
Time $t_{[25^\circ C]}$ to Peak Temperature	$t_{[25^\circ C] \text{ to Peak}}$	480 s
Time	t_L	60-150 s

● **ENVIRONMENTAL**

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH SVHC	COMPLIANT
RoHS	COMPLIANT

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