Ceramic Resonator SMD
3.2 x 1.3mm

MRCE series

MERITEK

FEATURE

- **Built-In Capacitor Option**
- **High Reliability Low Cost**
- **RoHS Compliant**

PART NUMBERING SYSTEM

MRCE T 5 10M0
(1) (2) (3) (4)

RoHS

No	Item	Code	Description	Series Reference
(1)	**Meritek Series**	MRCE	Resonator Unit	SMD Ceramic Resonator 3.2 x 1.3mm
(2)	**Built-In Capacitor**	T	T: 3 Pad	T: 3 Pad (with built-in capacitor)
(3)	**Frequency Accuracy**	5	5: ±0.5% (standard)	5: ±0.5% (standard), 3: ±0.3%
(4)	**Frequency**	10M0	6M0: 6.00MHz	8M0 ~ 30M0 (M denotes decimal point)

Notes:
1. See table below for Standard Built-In Capacitance Values. Contact Meritek for more info regarding non-standard Built-In Capacitance.
2. Contact Meritek for information regarding custom options.

ELECTRICAL CHARACTERISTICS

Parameters		Characteristic
Frequency Range		8.00 ~ 30.00 MHz
Resonant Impedance	**8.00 ~ 30.00 MHz**	40 Ω max.
Frequency Accurancy		±0.5% (±0.3% optional)
Temp Coefficient (-25°C ~ +85°C)	**8.00 ~ 30.00 MHz**	±0.3%
Operating Temperature		-25 ~ +85°C
Storage Temperature		-55 ~ +85°C
Withstanding Voltage		50 Vdc max. (DC, 1 min.)
Aging		±0.2% (from initial value)
Insulation Resistance		500 MΩ min. (@10Vdc, 1 min)
Rating Voltage		6Vdc
		15V p-p
Packaging Unit		3,000 pcs (Tape and Reel)

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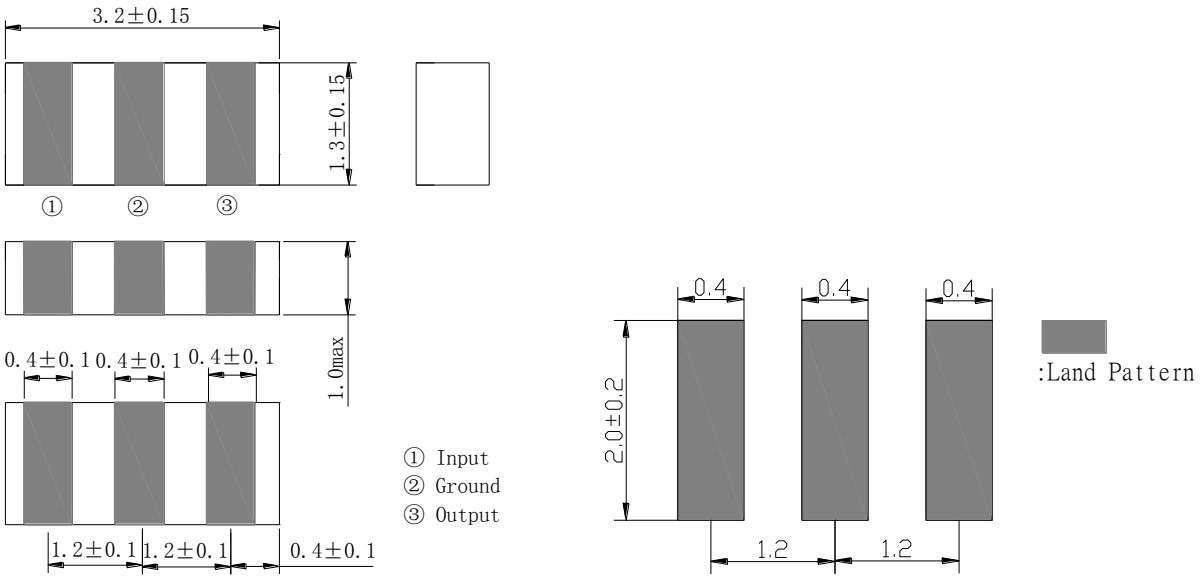
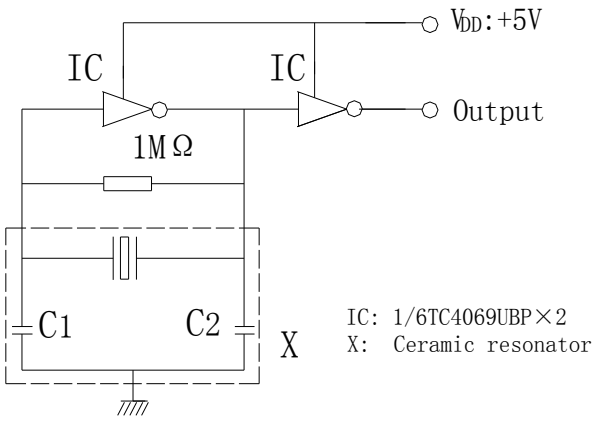
OUTLINE DRAWING AND TEST CIRCUIT

Test parts under the condition (Temp.: 20±15°C, Humidity: 65±20% R.H.) unless regulated measuring standard condition is (Temp.: 25±3°C,Humidity: 65±10% R.H.)

MRCET: 3 Pad - With Built-In Capacitance





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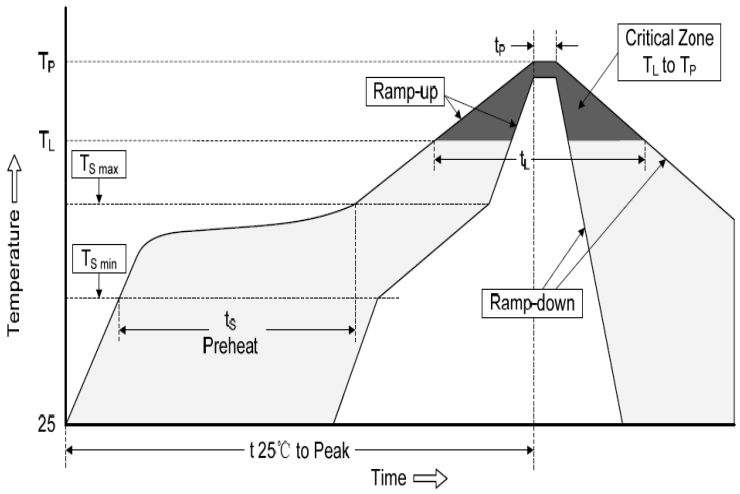
STANDARD BUILT-IN CAPACITANCE (C1=C2)

Frequency Range	C1=C2 Value
8.00 ~ 30.00 MHz	15pF±20%

1. For 3 Pad Built-In Capacitance Resonators only.
2. Values can be used as reference for test ciruits of 2 Pad Resonators.

RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	140°C
	Temp. Max $T_{s(max)}$	170°C
	Time (min. to max.) (t_s)	80~120 seconds
Average ramp up rate (T_L) to peak		1°C/second max.
$T_{s(max)}$ to T_L (Ramp-up rate)		3°C/second max.
Reflow	Temp. (T_L)	230°C
	Time (min. to max.) (t_L)	30~40 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		10 seconds max.
Ramp-down Rate		6°C/second



CAUTION

- Do not apply excess mechanical stress to the components or terminals during soldering.
- Do not bend the component.
- This component is not hermetically sealed. Do not clean or wash the component.
- Do not use strong acidity flux with more than 0.2wt% of chlorine content during flow soldering.
- Keep component away from fire.
- Do not apply any type of re-flow soldering to the component.
- This document specifies the quality and performance of the component as a single unit. The application circuit may affect the performance. Evaluate thoroughly.
- Shelf Life of the component is 12 months after delivery. Keep components in sealed package. Meritek recommends that components stored longer than six months are tested for solderability before use.
- This product is not recommended for Automotive, Medical or Life Critical applications. Contact Meritek to learn more about components for such applications.

*Specifications subject to change without notice.