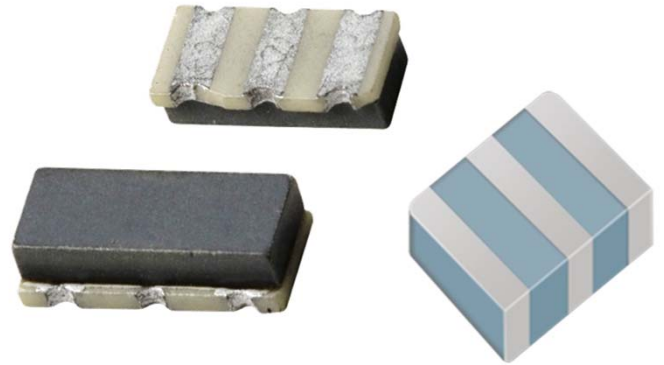


Application of Crystal

- ▶ Radio communication
- ▶ Keyboard
- ▶ Mouse
- ▶ Digital camera
- ▶ DVB

Features

- ▶ Built-in Capacitor
- ▶ High reliability for low cost
- ▶ Small dimensions and low profile
- ▶ Wide frequency range
- ▶ Excellent clock signal generator
- ▶ Tape & Reel delivery form possible



Electrical Specification

Part Number	Model	RESONATOR ZTT SMD SERIES
ZTACC-MG	Frequency Range	2.00 - 8.00 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACR-MG	Frequency Range	4.00 - 8.00 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACE-MG	Frequency Range	8.00 - 12.00 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACS-MT	Frequency Range	6.00 - 13.00 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.4% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACV-MT	Frequency Range	8.00 - 13.0 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.4% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%

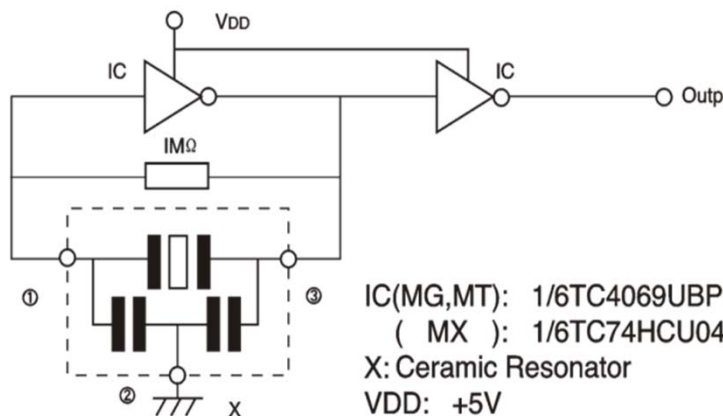
RESONATOR ZTA SMD SERIES



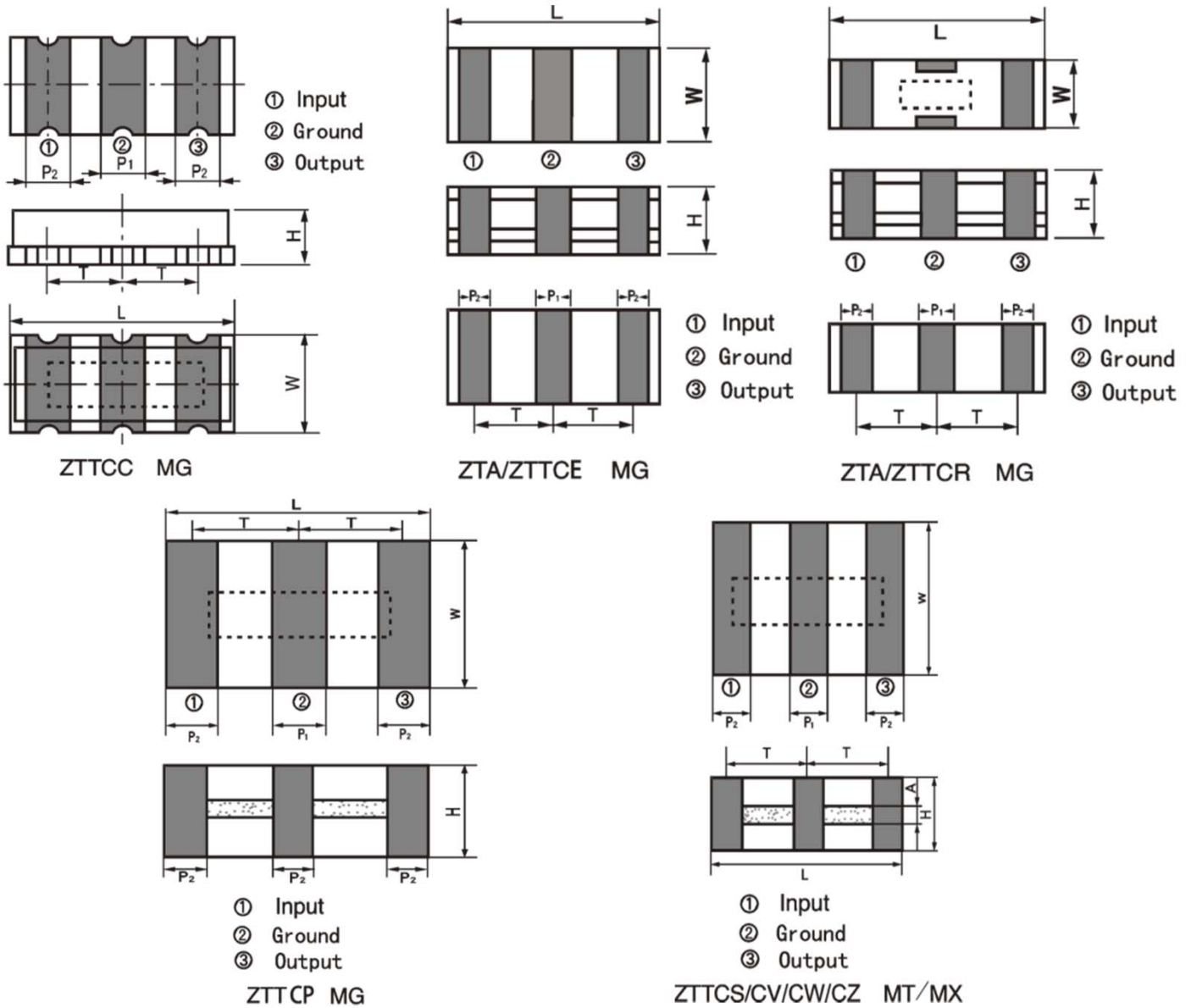
Part Number	Model	RESONATOR ZTA SMD SERIES
ZTACS-MX	Frequency Range	13.01 - 60.0 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACV-MX	Frequency Range	16.00 - 60.0 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACW-MX	Frequency Range	20.00 - 60.0 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACZ-MX	Frequency Range	24.00 - 60.0 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%
ZTACP-MG	Frequency Range	2.00 - 12.0 MHz
	Frequency Accuracy	±0.5% at 25°C
	Stability over Temperature	±0.3% over -25/+85°C
	Operating Temperature	-25/+85°C
	Aging For 10 Years	±0.3%

TEST CIRCUIT FOR MOS IC

ZTTCC/CR/CE/CS/CV/CW/CZ/CP - MG/MT/MX



DIMENSIONS(mm) :



Part Number	L	W	H	P1	P2	T
ZTCC-MG	7.4±0.2	3.4±0.2	1.8±0.2	1.2±0.2	1.2±0.2	5.0±0.2 2.5±0.2
ZTTCR-MG	4.5±0.2	2.0±0.2	1.2max	0.8±0.2	0.8±0.2	1.5±0.2
ZTTCE-MG	3.2±0.2	1.3±0.2	1.0max	0.4±0.2	0.4±0.2	1.2±0.2
ZTTCS-MT/MX	4.7±0.2	4.1±0.2	(1.2+A)±0.2	1.0±0.2	0.8±0.2	3.9±0.2 1.95±0.2
ZTTCV-MT/MX	3.7±0.2	3.1±0.2	(1.0+A)±0.2	0.9±0.2	0.7±0.2	3.0±0.2 1.5±0.2
ZTTCW-MX	2.5±0.2	2.0±0.2	1.2max	0.5±0.2	0.4±0.2	2.0±0.2 1.0±0.2
ZTT CZ-MX	2.2±0.2	1.8±0.2	1.2max	0.4±0.2	0.5±0.2	1.7±0.2 0.85±0.2
ZTTCP-MG	6.0±0.2	3.0±0.2	1.8±0.2 1.5±0.2 1.7±0.2	1.2±0.2	1.2±0.2	5.0±0.2 2.5±0.2

Note: A stands for thickness of the ceramic element, which varies with the frequency. The range of the thickness difference
No middle terminal for ZTA series.