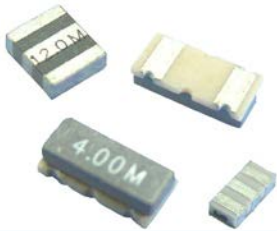


# Ceramic Unit

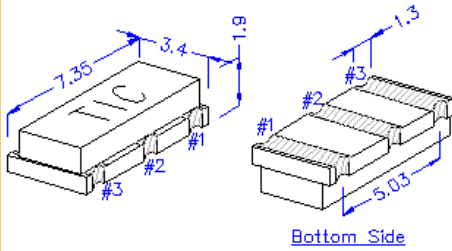


## Chip Type Resonator



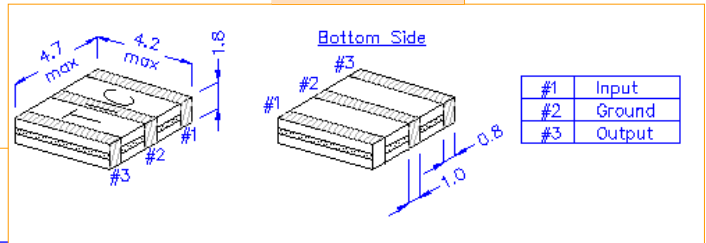
- mini Surface Mount Device
- ZTA (without built-in capacitors) and ZTT (built-in capacitors) available
- used for microprocessor.

### CC



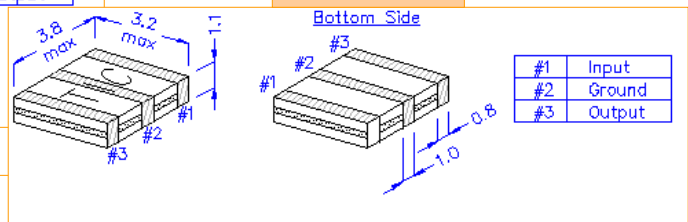
#1	Input
#2	Ground
#3	Output

### CS



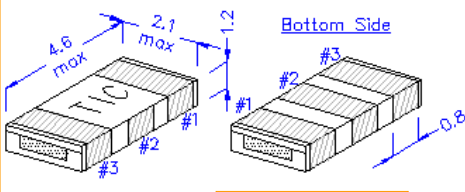
#1	Input
#2	Ground
#3	Output

### CV



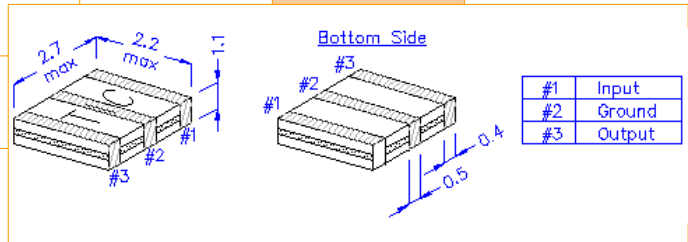
#1	Input
#2	Ground
#3	Output

### CR



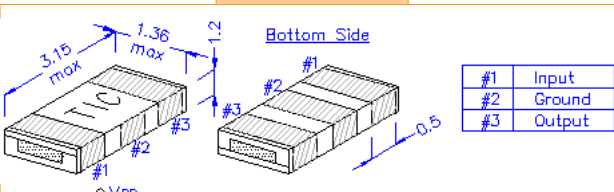
#1	Input
#2	Ground
#3	Output

### CW

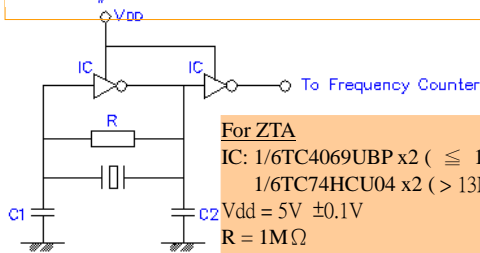


#1	Input
#2	Ground
#3	Output

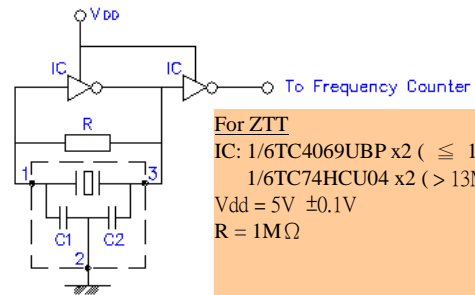
### CE



#1	Input
#2	Ground
#3	Output



For ZTA  
 IC: 1/6TC4069UBP x2 ( $\leq 13\text{MHz}$ )  
 1/6TC74HCU04 x2 ( $> 13\text{MHz}$ )  
 $V_{dd} = 5V \pm 0.1V$   
 $R = 1M\Omega$



For ZTT  
 IC: 1/6TC4069UBP x2 ( $\leq 13\text{MHz}$ )  
 1/6TC74HCU04 x2 ( $> 13\text{MHz}$ )  
 $V_{dd} = 5V \pm 0.1V$   
 $R = 1M\Omega$

	CC	CR	CE	CS	CV	CW
1.84 ~ 3.99 MHz						
4.00 ~ 8.00 MHz						
8.00 ~ 12.00 MHz						
12.01 ~ 16.00 MHz						
16.93 ~ 50.00 MHz						