

# CERAMIC CHIP CAPACITORS Z5U & Y5V DIELECTRIC

# LAUBE

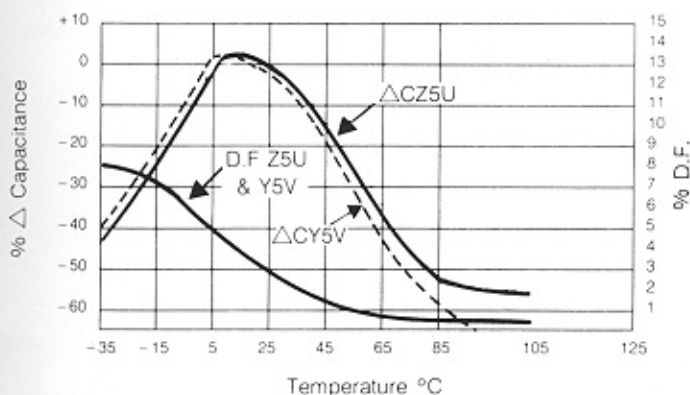
## APPLICATION:

The Hi-K (Z5U, Y5V) dielectrics deliver high capacitance density and are ideally suited for applications where space is at a premium, or as replacement for tantalum capacitors. Typical applications include use as by-pass or decoupling elements. Best performance is obtained at or near room temperature, with low D.C. bias (< 25 VDCW).

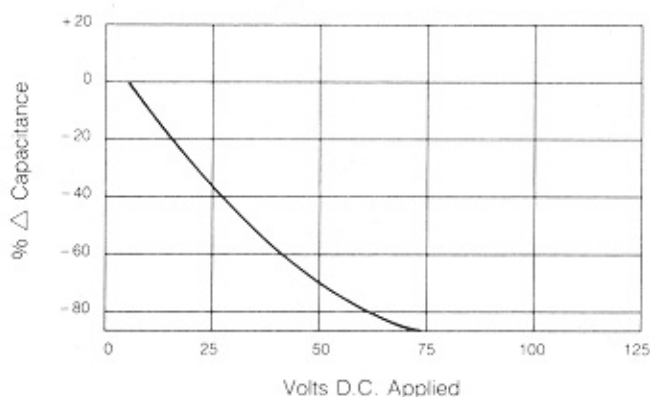
## General Specification

- Operating temperature range - 30°C ~ + 85°C
- Capacitance Range: 10000pF ~ 2200000pF
- Capacitance Tolerance:  $\pm 20\%$ , + 80 / - 20%
- Voltage Ratings: 16VDC, 25VDC, 50VDC, 100VDC, 200VDC, 250VDC, 500VDC, 1KV, 2KV, 3KV
- Dissipation Factor (Z5U: 1 KHz, 0.5Vrms, 25°C, Y5V: 1 Vrms, 25°C) 5% Max
- Insulation Resistance (rated voltage applied at 25°C) 100,000 M  $\Omega$  or 500  $\Omega$  -F min
- Dielectric strength > 2.5X WV. DC.

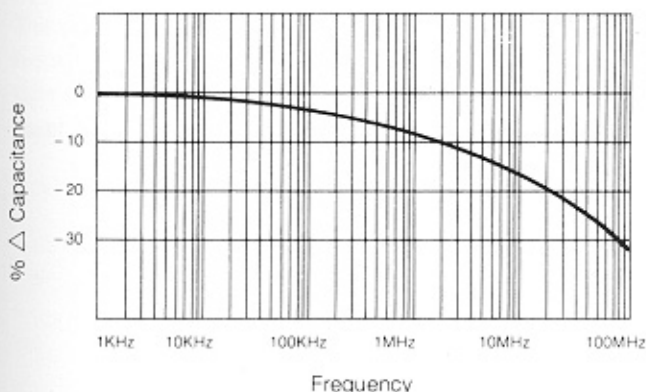
$\Delta C$ , D.F. VS. Temperature coefficient



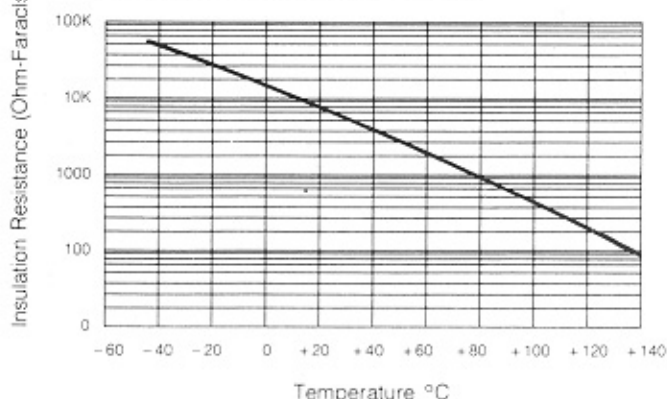
$\Delta C$ , VS. Voltage Coefficient



$\Delta C$ , VS. Frequency Coefficient



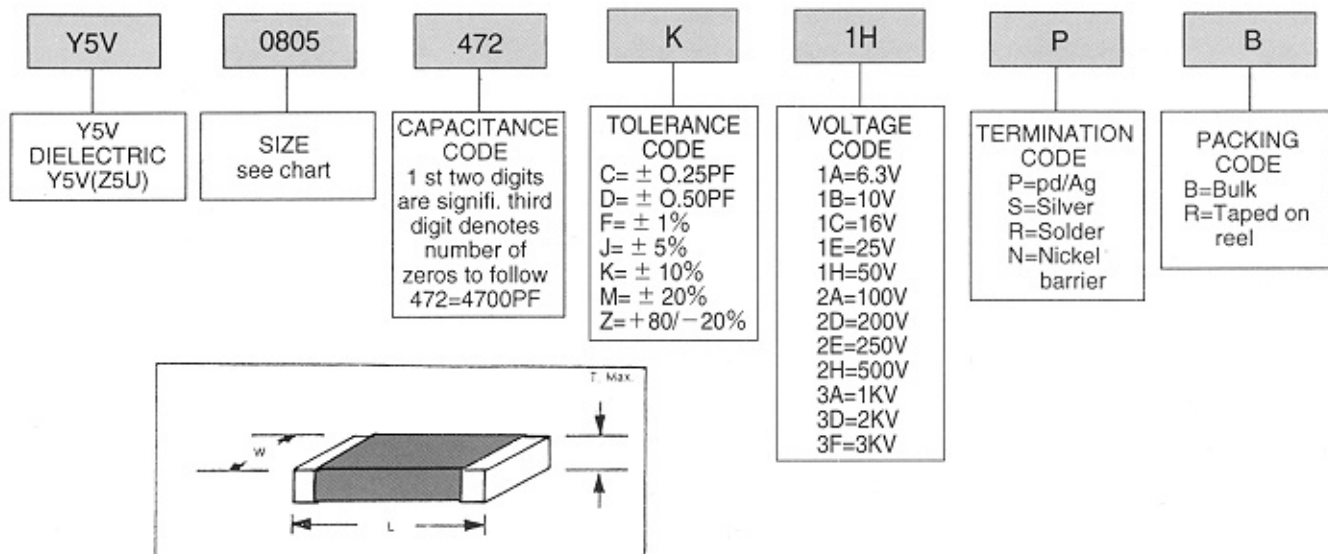
Insulation Resistance VS. Temp.



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### Part Code Designation



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TYPE	RATED VOLT. (VDC)	CAPACITANCE		DIMENSIONS (MM)		
		RANGE (pF)	TOL	L	W	T max
0402	25	10000 ~ 100000	Z	1.00 $\pm$ 0.05	0.50 $\pm$ 0.05	0.55
0603		10000 ~ 220000		1.60 $\pm$ 0.10	0.80 $\pm$ 0.10	0.80
0805		10000 ~ 1000000		2.00 $\pm$ 0.15	1.25 $\pm$ 0.15	1.25
1206		100000 ~ 1000000		3.20 $\pm$ 0.20	1.60 $\pm$ 0.20	1.27
0603	50	10000 ~ 1000000	Z	1.60 $\pm$ 0.10	0.80 $\pm$ 0.10	0.80
0805	50	10000 ~ 1000000	M.Z.	2.00 $\pm$ 0.15	1.25 $\pm$ 0.15	1.25
1206		10000 ~ 1000000		32.0 $\pm$ 0.20	16.0 $\pm$ 0.20	1.27
1210		560000 ~ 1500000		32.0 $\pm$ 0.20	25.0 $\pm$ 0.20	1.65
1812		1000000 ~ 2200000		4.50 $\pm$ 0.20	3.20 $\pm$ 0.20	1.65

#### NOTES

- Dimensions are in millimeters.
- Other capacitance values and voltages are available upon request. Load Pull Strength (1kg, 10 Sec.)