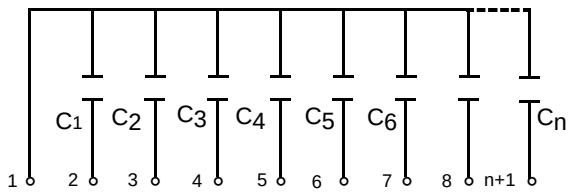
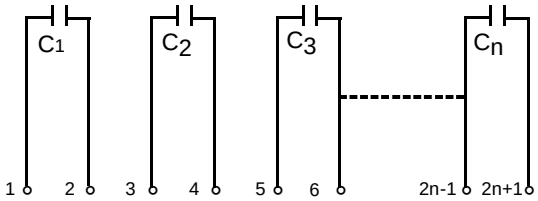
Circuits Construction

A Style



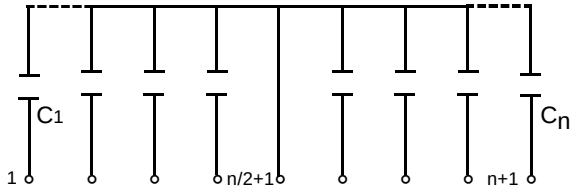
$C_1 = C_2 = ... = C_n$

B Style



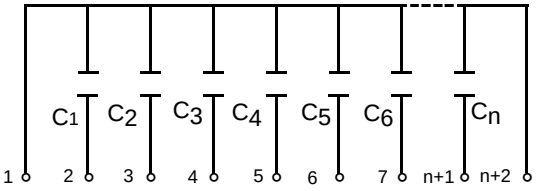
$C_1 = C_2 = ... = C_n$

C Style



$C_1 = C_2 = ... = C_n$

T Style



$C_1 = C_2 = C_3 = ... = C_n$

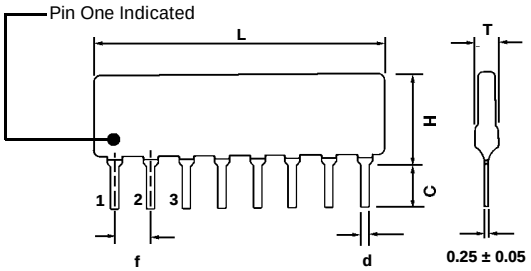
Rating

E-12 Series Capacitance Range	CNS	CNL
	10pf-.15µF	.047-1µF
T.C.R.	NPO, X7R, Z5U	
Capacitance Tol.	J, K, M, Z	
Rated Voltage (VDC)	25V, 50V, 100V	

*For extended values please consult factory.

TYPE	L (MAX)	H (Max) CNS	H (Max) CNL	T (Max)	C ±0.5	d ±0.05	f ±0.2
4 Pin	10.2	7.6	12.7	3.5	3.5	0.5	2.54
5 Pin	12.7						
6 Pin	15.3						
7 Pin	17.8						
8 Pin	20.4						
9 Pin	22.9						
10 Pin	25.4						
11 Pin	28.0						
12 Pin	30.5						
13 Pin	33.1						
14 Pin	35.6						

Dimension: mm



Part Numbering System

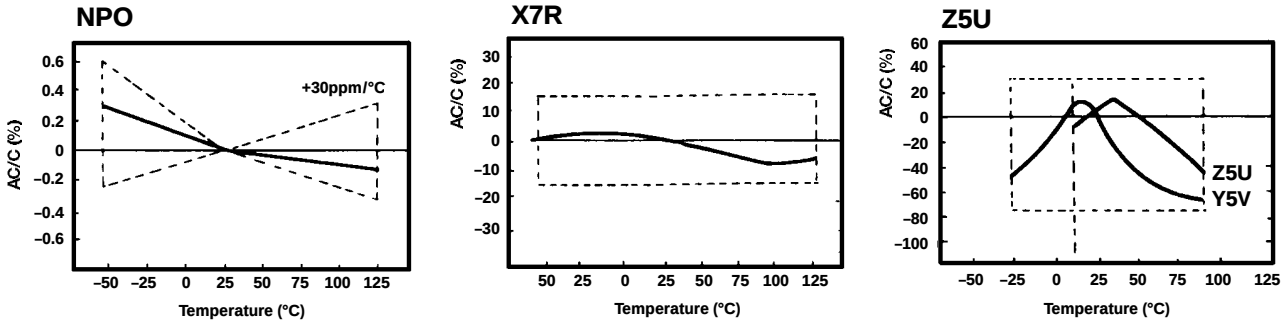
CNS	A	08	1H	Z	104	M
Series	**Circuits**	**Number Of Pin**	**Voltage**	**T. C.**	**Capacitance**	**Tolerance**
CNS CNL	A B C T	04 = 4 PIN 05 = 5 PIN 06 = 6 PIN 07 = 7 PIN 08 = 8 PIN 09 = 9 PIN 10 = 10 PIN 11 = 11 PIN 12 = 12 PIN 13 = 13 PIN 14 = 14 PIN	1E = 25V 1H = 50V 2A = 100V	N = NPO W = X 7R Z = Z 5U	10PF = 100 100PF = 101 1,000PF = 102 0.1µF = 104	J = ± 5% K = ± 10% M = ± 20% Z = +80% - 20%

Capacitor Networks

Specifications

ITEM \ TC	NPO	X7R	Z5U
Temperature Coefficient	0 ± 30ppm/°C - 55°C ~ + 125°C	± 15% - 55°C ~ + 125°C	+ 22%, - 56% + 10°C ~ + 85°C
Capacitance Test 25°C	1 Vrms Max. at 1KHz (1 MHz for 100pF or less)	1Vrms Max. at 1KHz	1 Vrms Max. at 1KHz
Dissipation Factor 25°C	0.15% Max. at 1KHz, 1VRMS (1MHz for 100pF or less)	2.5% max. at 1KHz, 1Vrms Max.	5% Max at 1KHz, 1 Vrms Max.
Dielectric Strength 25°C	300% rated voltage For 5 Sec 50 mA.Max.	250% rated voltage for 5 Sec. with 50mA. Max. charging	
Life Test (1000 hours)	≤ ±3% at 200% rated voltage, 125°C	≤ ± 12.5% at 200% rated voltage, 125°C	≤ ± 30% at 200% rated voltage, 85°C
Insulation Resistance 25°C	100G or 1000MΩ - MFD whichever is less		10G or 100MΩ MFD whichever is less

Typical Temperature Characteristics Curves



Capacitance Range

Temperature Coefficient	Type	Capacitance Range	Tolerance
NPO	CNS	10pF – 1,000pF	J = ± 5% K = ±10%
X7R	CNS CNL	220pF – 0.022µF 0.047µF – 0.22µF	K = ± 10% M = ± 20%
Z5U	CNS CNL	0.01µF – 0.15µF 0.1µF – 1µF	M = ± 20%, Z =+ 80/ - 20%