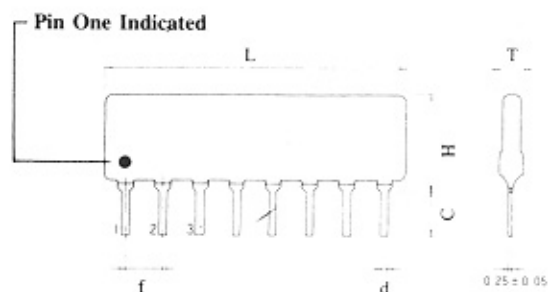


CAPACITOR NETWORKS-SIP

LAUBE

DIMENSION: mm

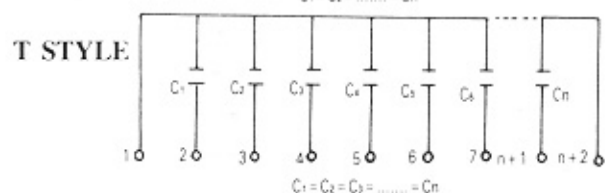
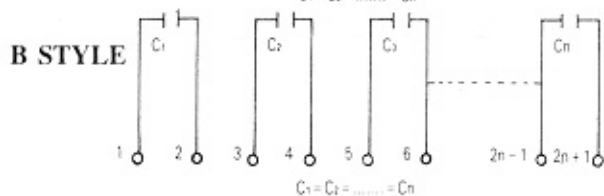
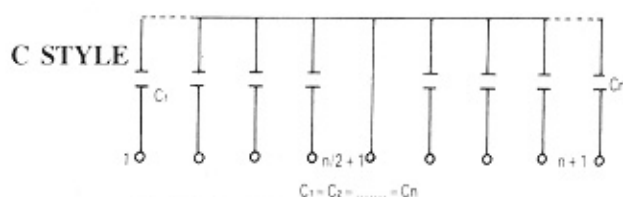
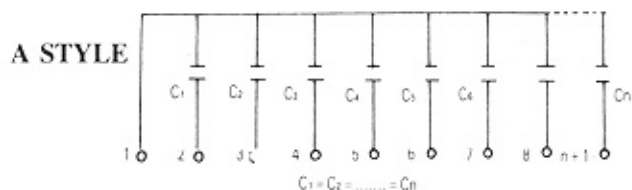


RATING

E-12 Series Capacitance Range	CS	CL
	10pf-0.022 μ F	0.01 μ F-1 μ F
T.C.R.	NPO, X7R, Z5U	
Capacitance Tol.	J, K, M, Z	
Rated Voltage(VDC)	25V, 50V, 100V	

TYPE	L (MAX)	H (Max)		T (Max)	C ± 0.5	d $+ 0.05$	f ± 0.2
		CS	CL				
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						

CIRCUITS CONSTRUCTION



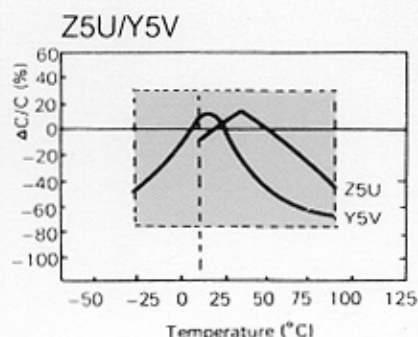
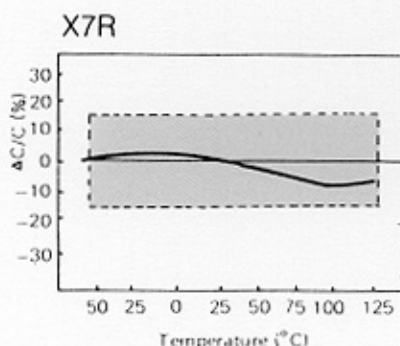
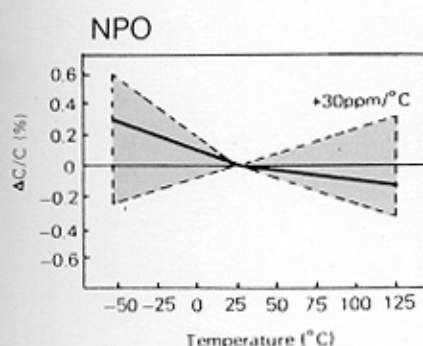
PART CODE DESIGNATION

CS	A	08	1H	Z	104	M
SERIES	CIRCUITS	NUMBER OF PIN 4-14PINS	VOLTAGE	T. C	CAPACITANCE	TOLERANCE
CS CL	A STYLE B C T		1 E - 25V 1 H - 50V 2 A - 100V	N - NPO W - X7R Z - Z5U	10PF - 100 100PF - 101 1,000PF - 102 0.1 μ F - 104	J - $\pm 5\%$ K - $\pm 10\%$ M - $\pm 20\%$ Z - $+80\%$ -20%

GENERAL SPECIFICATION

ITEM \ TC	NPO	X7R	Z5U
Temperature Coefficient	$0 \pm 30 \text{ ppm}/^\circ\text{C}$, -55°C ~ +125°C	$\pm 15\%$ -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)	1 Vrms Max. at 1KHz	1 V rms Max. at 1KHz
Dissipation Factor 25°C	0.15% Max. at 1KHz, 1VRMS (1MHz for 100pF or less)	2.5% max at 1KHz, 1 Vrms 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)	$\leq \pm 3\%$ at 200% rated voltage, 125°C.	$\leq \pm 12.5\%$ at 200% rated voltage, 125°C	$\leq \pm 30\%$ 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	CS	10pF — 1,000pF	J = $\pm 5\%$ K = $\pm 10\%$
X7R	CS	220pF — 0.022 μF	K = $\pm 10\%$ M = $\pm 20\%$
	CL	0.047 μF — 0.22 μF	
Z5U	CS	0.01 μF — 0.15 μF	M = $\pm 20\%$, Z = +80/-20%
	CL	0.1 μF — 1 μF	