

CKG SERIES | Mega Capacitor

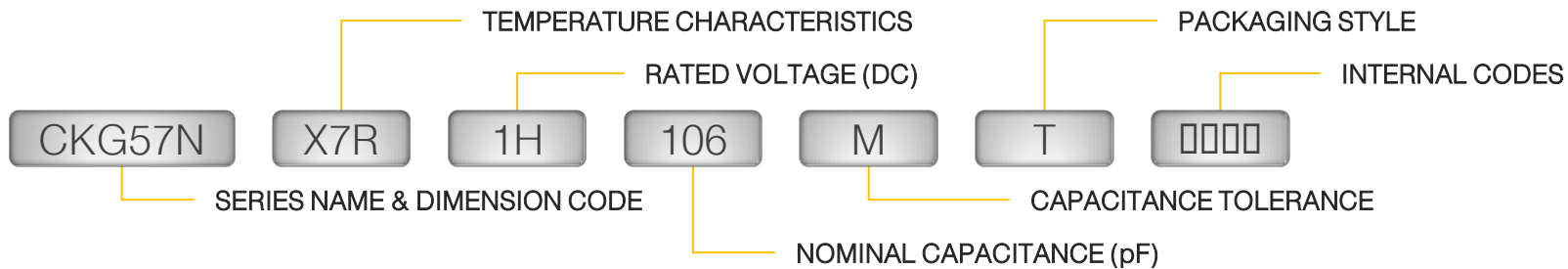


TDK Mega Cap utilizes an alloy 42 lead frame connected to the ends of MLCCs in single or double stacked (piled) configuration. The lead frame absorbs external stresses which allow a more robust performance. Effectively the lead frame allows external stresses beyond the typical allowable range for a traditional MLCC.

Mega Caps are excellent choices for high board flex applications as well as physically large boards that are highly susceptible to flexure. Other flex solutions are designed to resist short circuit but still cause the capacitor to fail intermittently or completely but the Mega Cap has a greater degree of flexure resistance without capacitor failure. Compared to electrolytic capacitors, Mega Cap offers lower ESL, ESR, and improved frequency response and since Mega Cap is an MLCC, they have no polarity. Other advantages include higher capacitance with higher voltage rating due to stacking the capacitors in parallel configuration.

Case Code	L (mm)	W (mm)	T (mm)
CKG32K (Single)	3.50	2.60	3.35
CKG45K (Single)	5.00	3.50	2.90
CKG57K (Single)	6.00	5.00	3.35
CKG45N (Double)	5.00	3.50	5.00
CKG57N (Double)	6.00	5.00	5.00

Part Number Description



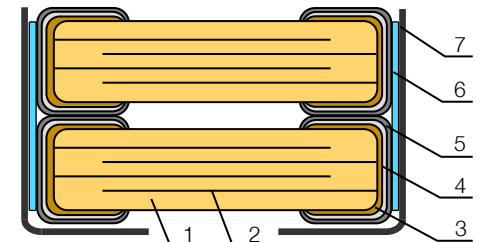
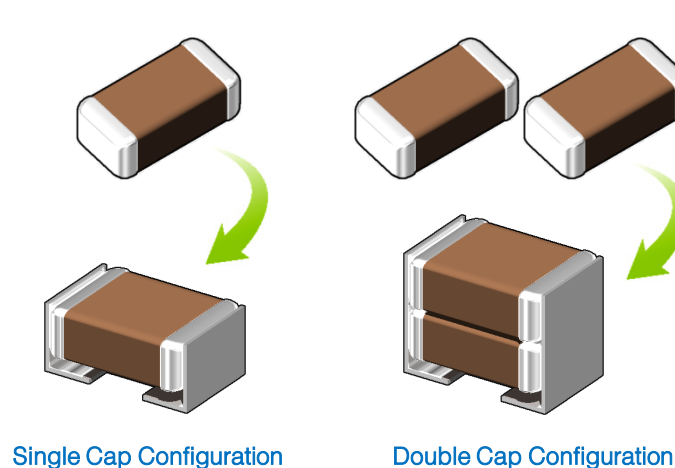
Features:

- ❖ Twice the capacitance on single capacitor foot print
- ❖ Lower ESR and ESL than AI caps
- ❖ Capable of absorbing thermal and mechanical stress
- ❖ Improved heat generation by ripple current
- ❖ Improved vibration performance

Applications:

- ❖ Smoothing circuits
- ❖ DC/DC converters
- ❖ HID/Automotive applications
- ❖ Temperature variable applications
- ❖ Piezoelectric-effect countermeasure

Design Concept & Construction of Mega Capacitor



No.	NAME	MATERIAL
		Class 2
(1)	Ceramic Dielectric	BaTiO ₃
(2)	Internal Electrode	Nickel (Ni)
(3)	Termination	Copper (Cu)
(4)		Nickel (Ni)
(5)		Tin (Sn)
(6)	Metal Cap Joint	High Temp Solder
(7)	Metal Cap	42 Alloy

CKG SERIES | Mega Capacitor / X7R, X7S, X7T, X5R

Capacitance (pF)	Cap Code	CKG32K (Single) 1210/C3225						CKG45K (Single) 1812/C4532						CKG57K (Single) 2220/C5750								
		2J (630V)	2W (450V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	2J (630V)	2W (450V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	2J (630V)	2W (450V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	
47,000	473	█																				
100,000	104			█				█														
150,000	154	█																				
220,000	224		█					█							█							
330,000	334		█	█																		
470,000	474								█		█				█			█				
1,000,000	105									█		█				█						
2,200,000	225											█					█					
3,300,000	335																	█				
4,700,000	475																					
10,000,000	106																					
22,000,000	226																					
47,000,000	476																					

Capacitance (pF)	Cap Code	CKG45N (Double) 1812/C4532							CKG57N (Double) 2220/C5750													
		2J (630V)	2W (450V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)	2J (630V)	2W (450V)	2E (250V)	2A (100V)	1H (50V)	1E (25V)	1C (16V)							
220,000	224	█																				
470,000	474	█																				
1,000,000	105		█																			
2,200,000	225																					
3,300,000	335																					
4,700,000	475																					
6,800,000	685																					
10,000,000	106																					
22,000,000	226																					
33,800,000	336																					
47,000,000	476																					
100,000,000	107																					

█ X7R █ X7S █ X7T █ X5R