

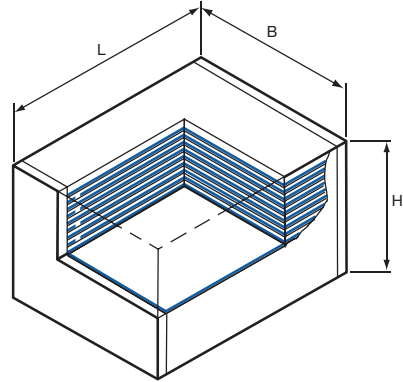
- Metallized polyethylene naphthalate (PEN) stacked film SMD

TYPICAL APPLICATIONS

General purpose coupling, bypass, filtering, timing, time constant, oscillation circuits.

CONSTRUCTION

Metallized polyethylene naphthalate (PEN) non-encapsulated stacked film capacitor.



TECHNICAL DATA

Rated voltage U_R VDC U_R VAC	16	50	100	250
	8	32	40	125
Capacitance range, μF	0.12- 0.47	0.056- 0.22	0.012- 1.0	0.001- 1.0
	Capacitance tolerance, %			
Rated temperature, $^{\circ}\text{C}$	+105	+105	+85	+125
	Category temperature range			
Test voltage	16 VDC	-55 to +105 $^{\circ}\text{C}$		
	50 VDC	-55 to +105 $^{\circ}\text{C}$		
	100 VDC	-40 to +85 $^{\circ}\text{C}$		
	250 VDC	-55 to +125 $^{\circ}\text{C}$		
Insulation resistance	$C \leq 0.33 \mu\text{F}$		$C > 0.33 \mu\text{F}$	
	$\geq 3\,000 \text{ M}\Omega$		$1000 \Omega\text{F}$	
Dissipation factor	Measured at 20 $^{\circ}\text{C}$, 10 VDC, 60 s for			
	$U_R = 16 \text{ VDC}$; at 50 VDC for $U_R = 50 \text{ VDC}$; at 100 VDC for $U_R \geq 100 \text{ VDC}$			
Dissipation factor	$\leq 1.0 \%$ at 20 $^{\circ}\text{C}$, 1 kHz			

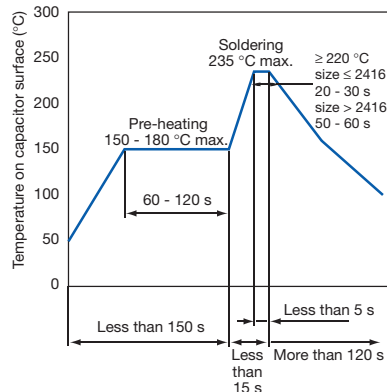
ORDERING INFORMATION

See article table and page 10 for article code construction.

RECOMMENDED SOLDERING CONDITIONS

Reflow soldering

The recommended soldering conditions are given in the figures below. Two consecutive soldering steps are allowed when the capacitors are cooled down to room temperature between the steps. Maximum limits 240 $^{\circ}\text{C}$ max. and 30 seconds max. at more than 220 $^{\circ}\text{C}$; temperature at capacitor surface.



Recommended reflow soldering profile

ARTICLE TABLE

Capacitance μF	Size code	Dimensions in mm			Quantity per package		Max dU/dt V/ μs	Article code
		B	H	L	Bulk	Reel		
16 VDC								
0.12	1812	3.3	1.4	4.8	3000		60	ERS1812WUC124J169
0.15	1812	3.3	2.0	4.8	3000		60	ERS1812WUC154J169
0.18	1812	3.3	2.0	4.8	3000		60	ERS1812WUC184J169
0.22	1812	3.3	2.4	4.8	2000		60	ERS1812WUC224J169
0.27	2216	4.1	1.8	6.0	3000		40	ERS2216WUC274J169
0.33	2216	4.1	2.0	6.0	3000		40	ERS2216WUC334J169
0.39	2216	4.1	2.4	6.0	2000		40	ERS2216WUC394J169
0.47	2216	4.1	2.8	6.0	2000		40	ERS2216WUC474J169
50 VDC								
0.056	1812	3.3	2.0	4.8	3000		190	ERS1812WUC563J509
0.068	1812	3.3	2.0	4.8	3000		190	ERS1812WUC683J509
0.082	1812	3.3	2.4	4.8	2000		190	ERS1812WUC823J509
0.10	1812	3.3	2.8	4.8	2000		190	ERS1812WUC104J509
0.12	2216	4.1	1.8	6.0	3000		130	ERS2216WUC124J509
0.15	2216	4.1	2.0	6.0	3000		130	ERS2216WUC154J509
0.18	2216	4.1	2.4	6.0	2000		130	ERS2216WUC184J509
0.22	2216	4.1	2.8	6.0	2000		130	ERS2216WUC224J509
100 VDC								
0.012	1812	3.3	1.4	4.8	3000		320	ERS1812WUC123K1009
0.015	1812	3.3	1.4	4.8	3000		320	ERS1812WUC153K1009
0.018	1812	3.3	1.4	4.8	3000		320	ERS1812WUC183K1009
0.022	1812	3.3	1.4	4.8	3000		320	ERS1812WUC223K1009
0.027	1812	3.3	1.4	4.8	3000		320	ERS1812WUC273K1009
0.033	1812	3.3	1.4	4.8	3000		320	ERS1812WUC333K1009
0.039	1812	3.3	1.4	4.8	3000		320	ERS1812WUC393K1009
0.047	1812	3.3	2.0	4.8	3000		320	ERS1812WUC473K1009
0.056	1812	3.3	2.0	4.8	3000		320	ERS1812WUC563K1009
0.068	1812	3.3	2.4	4.8	2000		320	ERS1812WUC683K1009
0.082	1812	3.3	2.8	4.8	2000		320	ERS1812WUC823K1009
0.10	2216	4.1	1.8	6.0	3000		210	ERS2216WUC104K1009
0.12	2216	4.1	2.4	6.0	2000		210	ERS2216WUC124K1009
0.15	2216	4.1	2.8	6.0	2000		210	ERS2216WUC154K1009
0.18	2820	5.0	2.0	7.1	1500		120	ERS2820WUC184K1009 *
0.22	2820	5.0	2.4	7.1	1500		120	ERS2820WUC224K1009 *
0.27	2820	5.0	2.9	7.1	1500		120	ERS2820WUC274K1009 *
0.33	2820	5.0	3.5	7.1	1500		120	ERS2820WUC334K1009 *
0.39	3022	5.5	3.4	7.7	1000		100	ERS3022WUC394K100V *
0.47	3022	5.5	4.0	7.7	1000		100	ERS3022WUC474K100V *
0.56	3925	6.3	3.0	9.8	1000		70	ERS3925WUC564K100V *
0.68	3925	6.3	3.6	9.8	1000		70	ERS3925WUC684K100V *
0.82	3925	6.3	4.3	9.8	1000		70	ERS3925WUC824K100V *
1.0	3925	6.3	5.1	9.8	1000		70	ERS3925WUC105K100V *
250 VDC								
0.0010	1812	3.3	1.4	4.8	3000		615	ERS1812WUC102K2509
0.0012	1812	3.3	1.4	4.8	3000		615	ERS1812WUC122K2509
0.0015	1812	3.3	1.4	4.8	3000		615	ERS1812WUC152K2509
0.0018	1812	3.3	1.4	4.8	3000		615	ERS1812WUC182K2509
0.0022	1812	3.3	1.4	4.8	3000		615	ERS1812WUC222K2509
0.0027	1812	3.3	1.4	4.8	3000		615	ERS1812WUC272K2509
0.0033	1812	3.3	1.4	4.8	3000		615	ERS1812WUC332K2509
0.0039	1812	3.3	1.4	4.8	3000		615	ERS1812WUC392K2509
0.0047	1812	3.3	1.4	4.8	3000		360	ERS1812WUC472K2509
0.0056	1812	3.3	1.4	4.8	3000		360	ERS1812WUC562K2509
0.0068	1812	3.3	1.4	4.8	3000		360	ERS1812WUC682K2509
0.0082	1812	3.3	1.4	4.8	3000		360	ERS1812WUC822K2509
0.010	1812	3.3	1.4	4.8	3000		360	ERS1812WUC103K2509
0.012	1812	3.3	1.4	4.8	3000		360	ERS1812WUC123K2509

* Only $\pm 10\%$ tolerance

ARTICLE TABLE

Capacitance μF	Size code	Dimensions in mm			Quantity per package		Max dU/dt V/ μs	Article code
		B	H	L	Bulk	Reel		
250 VDC								
0.015	1812	3.3	1.4	4.8	3000		360	ERS1812WUC153K2509
0.018	1812	3.3	2.0	4.8	3000		360	ERS1812WUC183K2509
0.022	1812	3.3	2.0	4.8	3000		360	ERS1812WUC223K2509
0.027	1812	3.3	2.4	4.8	2000		360	ERS1812WUC273K2509
0.033	1812	3.3	2.8	4.8	2000		360	ERS1812WUC333K2509
0.039	2216	4.1	2.0	6.0	3000		240	ERS2216WUC393K2509
0.047	2216	4.1	2.4	6.0	2000		240	ERS2216WUC473K2509
0.056	2216	4.1	2.8	6.0	2000		240	ERS2216WUC563K2509
0.068	2216	4.1	3.2	6.0	2000		240	ERS2216WUC683K2509
0.082	2220	5.0	3.2	6.0	1500		240	ERS2220WUC823K2509
0.10	2220	5.0	3.8	6.0	1500		240	ERS2220WUC104K2509
0.12	2220	5.0	4.5	6.0	1500		240	ERS2220WUC124K2509
0.15	2825	6.3	3.5	7.1	1000		190	ERS2825WUC154K250V *
0.18	2825	6.3	4.1	7.1	1000		190	ERS2825WUC184K250V *
0.22	2825	6.3	5.1	7.1	1000		190	ERS2825WUC224K250V *
0.27	3925	6.3	3.9	9.8	1000		115	ERS3925WUC274K250V *
0.33	3925	6.3	4.8	9.8	1000		115	ERS3925WUC334K250V *
0.39	3931	8.0	4.4	9.8	1000		115	ERS3931WUC394K250V *
0.47	3931	8.0	5.3	9.8	1000		115	ERS3931WUC474K250V *
0.56	6031	8.0	3.7	15.2	750		65	ERS6031WUC564K250Z *
0.68	6031	8.0	4.4	15.2	750		65	ERS6031WUC684K250Z *
0.82	6039	10.0	4.2	15.2	750		65	ERS6039WUC824K250Z *
1.0	6039	10.0	5.1	15.2	750		65	ERS6039WUC105K250Z *

* Only $\pm 10\%$ tolerance