Product Selection Guide

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TANTALUM

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Tantalum Surface Mount

Catalog F3102

Series	Case Size KEMET/EIA	Dimensions L x W x H (mm)	Cap Range	Characteristics
T409 T419 T429	A B C D E F G H X	2.54 x 1.27 x 1.27 3.81 x 1.27 x 1.27 5.08 x 1.27 x 1.27 3.81 x 2.54 x 1.27 5.08 x 2.54 x 1.27 5.59 x 3.43 x 1.78 6.73 x 2.79 x 2.79 7.24 x 3.81 x 2.79 6.93 x 5.41 x 2.74	.22 - 6.8µF .47 - 22µF .68 - 10µF 1.0 - 33µF 1.5 - 68µF 3.3 - 100µF 4.7 - 150µF 6.8 - 330µF 15 - 150µF	• Mil-PRF-55365/4 & 11 (CWR09/19/29 • 4 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • 100% Surge Current Test available • Tape and reel packaging • Termination Options Available
T491	A/3216-18 B/3528 -21 C/6032-28 D/7343-31 X/7343-43 E/7260-38	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0 7.3 x 6.0 x 3.6	.10 - 100µF .15 - 150µF .47 - 330µF 1.5 - 680µF 6.8 - 1000µF 470 - 1000µF	• Industrial/commercial grade • 2.5 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
T491	R/2012-12 S/3216-12 T/3528-12 U/6032-15 V/7343-20	2.0 X 1.3 X 1.2 3.2 X 1.6 X 1.2 3.5 X 2.8 X 1.2 6.0 X 3.2 X 1.5 7.3 X 4.3 X 2.0	1.0 - 10µF 1.0 - 22µF 3.3 - 100µF 6.8 - 100.µF 1.0 - 330 µF	• Low profile • 2.5 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
T492	A/3216-18 B/3528 -21 C/6032-28 D/7343-31	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8	.10 - 3.3µF .47 - 10µF 1.5 - 22µF 4.7 - 47µF	• Mil-PRF-55365/8 (CWR11) • 4 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape and reel packaging • 100% Surge Current Test Available. • Termination Options Available
T493	A/3216-18 B/3528 -21 C/6032-28 D/7343-31 X/7343-43	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0	.10 - 33µF .15 - 100µF .47 - 220µF 1.5 - 330µF 4.7 - 330µF	• Commercial-Off-The-Shelf (COTS) • 4 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • Low ESR, surge tested, Weibull graded, termination options
T494	A/3216-18 B/3528 -21 C/6032-28 D/7343-31 X/7343-43 E/7260-38	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0 7.3 x 6.0 x 3.6	.10 - 100µF .15 - 150µF .47 - 330µF 1.5 - 680µF 6.8 - 1000µF 470 -1000µF	• Low ESR/Industrial grade • 3 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
T494	R/2012-12 S/3216-12 T/3528-12 U/6032-15 V/7343-20	2.0 X 1.3 X 1.2 3.2 X 1.6 X 1.2 3.5 X 2.8 X 1.2 6.0 X 3.2 X 1.5 7.3 X 4.3 X 2.0	1.0 - 10µF 1.0 - 22µF 3.3 - 100µF 6.8 - 100µF 1.0 - 330µF	• Low profile/Low ESR T494 product • 4 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
T495	A/3216-18 B/3528-21 C/6032-28 D/7343-31 X/7343-43 E/7260-38	3.6 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0 7.3 x 6.0 x 3.6	.47 - 6.8µF .47 - 150µF 2.2 - 330µF 6.8 - 470µF 4.7 - 1000µF 100 - 1000µF	• Low ESR/surge robust series • 4 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant • Available DSCC Dwg. 95158
T495	T/3528-12 V/7343-20	3.5 X 2.8 X 1.2 7.3 x 4.3 x 2.0	10 - 100µF 68 - 220µF	• Low profile/Low ESR/Surge Robust • 6 -16 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
T496	B/3528 -21 C/6032-28 D/7343-31 X/7343-43	3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0	.15 - 22µF .47 - 100µF 2.2 - 330µF 10 - 470µF	• Fail-safe fused series • 2.5 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant • Available DSCC Dwg. 04053

Tantalum Surface Mount

Catalog F3102

Series	Case Size KEMET/EIA	Dimensions L x W x H (mm)	Cap Range	Characteristics
 **T497**	A B C D E F G H X	2.54 x 1.27 x 1.27 3.81 x 1.27 x 1.27 5.08 x 1.27 x 1.27 3.81 x 2.54 x 1.27 5.08 x 2.54 x 1.27 5.59 x 3.43 x 1.78 6.73 x 2.79 x 2.79 7.24 x 3.81 x 2.79 6.93 x 5.41 x 2.74	.33 - 4.7µF .68 - 15µF ---------- 1.5 - 33µF 2.2 - 68µF 4.7 - 68µF 6.8 - 68µF 15 - 100µF ----------	• High Grade COTS • 4 - 50 Volts • ±20%; ±10% Cap tolerance • 100% Accelerated Steady State Aging • 100% Thermal Shock • Surge Current Testing Available • Tape and reel packaging • RoHS Compliant • Termination Options Available
 **T498**	A/3216-18 B/3528 -21 C/6032-28 D/7343-31 X/7343-43	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0	.33 - 4.7µF 2.2 - 33µF 1.5 - 47µF 10 - 100µF 22 - 220µF	• 150°C Maximum High Temperature • 6 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
 **T499**	A/3216-18 B/3528 -21 C/6032-28 D/7343-31 X/7343-43	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0	.15 - 4.7µF .47 - 33µF 1.5 - 68µF 3.3 - 150µF 33 - 220µF	• 175°C Maximum High Temperature • 6 - 50 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
T510	X/7343-43 E/7260-38	7.3 x 4.3 x 4.0 7.3 x 6.0 x 3.6	22 - 1000µF 47 - 1000µF	• Low ESR (<10-80mΩ) • 4 - 25 Volts • ±20%; ±10% Cap tolerance • Tape and reel packaging • RoHS Compliant
 **T520**	A/3216-18 B/3528 -21 C/6032-28 D/7343-31 Y/7343-40 X/7343-43	3.2 x 1.6 x 1.6 3.5 x 2.8 x 1.9 6.0 x 3.2 x 2.5 7.3 x 4.3 x 2.8 7.3 x 4.3 x 4.0 max 7.3 x 4.3 x 4.0	10 - 68µF 33 - 330µF 68 - 330µF 15 - 1000µF 330 - 1000µF 330 - 1000µF	• KEMET organic with polymer cathode • 2 - 25 Volts • ±20% Cap tolerance • Tape and reel packaging • RoHS Compliant • Low ESR (6 to 80mΩ)
 **T520**	T/3528-12 U/6032-15 W/7343-15 V/7343-20	3.5 x 2.8 x 1.2 max 6.0 x 3.2 x 1.5 max 7.3 x 4.3 x 1.5 max 7.3 x 4.3 x 1.9 max	15 - 100µF 33 - 220µF 33 - 330µF 15 - 470µF	• Low Profile T520 Product • KEMET organic with polymer cathode • 2 - 25 Volts • ±20% Cap tolerance • Tape and reel packaging • RoHS Compliant • Low ESR (6 to 90mΩ)
 **T525**	T/3528-12 B/3528-21 D/7343-31	3.5 x 2.8 x 1.2 3.5 x 2.8 x 1.9 7.3 x 4.3 x 2.8	33 - 100µF 33 - 150µF 47 - 680µF	• KEMET organic with polymer cathode • 2.5 - 16 Volts • ±20% Cap tolerance • 125°C Maximum operating temperature • RoHS Compliant • Available DSCC Dwg. 04051
 **T528**	I/3216-10 M/3528-15 Z/7343-17	3.2 x 1.6 x 1.0 3.5 x 2.8 x 1.5 7.3 x 4.3 x 1.7 max	33.0 - 100.0µF 100 - 220µF 150 - 330µF	• Face Down Termination Organic • Low Profile • Low ESL <0.7nH @ 20MHz • 2.5 - 10 Volts • ±20% Cap tolerance • RoHS Compliant
T530	D/7343-31 Y/7343-40 X/7343-43	7.3 x 4.3 x 2.8 7.3 x 4.3 x 1.9 7.3 x 4.3 x 4.0	150 - 680µF 220 - 1000µF 150 - 1500µF	• KEMET organic with polymer cathode • 2.5 - 10 Volts • Ultra-low ESR (≤4mΩ available) • ±20% Cap tolerance • RoHS Compliant • Available DSCC Dwg. 04052

Size Code *EIA/Metric	Dimensions L x W (mm)	Cap Range	Characteristics
***0201/0603**	0.6 x 0.03	C0G - 10 - 100pF X5R - 0.01 - 0.10µF	• Standard EIA Chip Sizes • RoHS Compliant • EIA Preferred Case Sizes • 4, 6.3, 10, 16, 25, 50, 100, 200 volts • C0G/NP0; X7R; X5R; Z5U;Y5V dielectrics • ± 0.10pF; ±0.25pF; ±0.5pF; ±1%; ±2%; ±5%; ±10%; ±20%; +80%/-20% Capacitance tolerance available • 90/10 Sn/Pb L Termination Available - C0G; X7R; Other dielectrics, contact factory • Mil-PRF-55681 approved Dimension and capacitance values may vary slightly. Refer to catalog F3102 for specific information. • Mil-PRF-123 approved and GR900 High Reliability available. Dimension and cap ranges will vary slightly. Refer to catalog F-3054 for specific information. • Flexible termination available (FT-CAP) in 0603 thru 1210 case sizes, 6.3 - 200 volts, X7R dielectric and AEC-Q200 qualified. • Tape and reel packaging available • Bulk cassette packaging available • See KEMET F3067 for QPL information
***0402/1005**	1.0 x 0.5	C0G - 0.5 - 1000pF X7R - 150 - 0.1µF X5R - 12,000pF - 2.2µF Y5V - 47,000pF - 0.10µF	
***0603/1608**	1.6 x 0.8	C0G - 0.5pF - 0.01µF X7R - 180pF - 1.0µF X5R - 0.27 - 10µF Y5V - 0.10 - 1.0µF	
***0805/2012**	2.0 x 1.25	C0G - 0.5pF - 0.033µF X7R - 220pF - 2.2µF X5R - 1.2 - 47µF Z5U - 6,800pF - 0.1µF Y5V - 0.22 - 10µF	
***1206/3216**	3.2 x 1.6	C0G - 1.0pF - 0.10µF X7R - 1000pF - 10µF X5R - 0.1 - 100µF Z5U - 0.01 - 0.22µF Y5V - 0.022 - 22µF	
***1210/3225**	3.2 x 2.5	C0G - 10pF - .022µF X7R - 2,200pF - 10µF X5R - 1.0 - 100µF Z5U - 0.047 - 1.0µF Y5V - 0.22 - 22µF	
***1812/4532**	4.5 x 3.2	C0G - 470pF - .012µF X7R - 6,800pF - 10.0µF Z5U - 0.082 - 1.0µF	
***1825/4564**	4.5 x 6.4	C0G - 3,900pF - 0.027µF X7R - 0.022 - 2.2µF Z5U - 0.18 - 2.2µF	
2220/5650	5.6 x 5.0	C0G - 6,800pF - 0.027µF X7R - 0.27 - 2.2µF	
2225/5664	5.6 x 6.3	C0G - 4,700pF - .033µF X7R - 0.047 - 2.2µF Z5U - 0.33 - 2.7µF	
Open-Mode	0805/2.0 x 1.25 1206/3.2 x 1.6 1210/3.2 x 2.5 1812/4.5 x 3.2	X7R - 0.01µF - 0.68µF X7R - 0.018 - 4.7µF X7R - 0.068 - 6.8µF X7R - 0.47µF - 1.0µF	• 0805, 1206, 1210, 1812 Chip Sizes • 16, 25, 50, 100, 200 Volts • X7R Dielectric • AEC-Q200 Qualified
1632 Array (4 elements)	3.2 x 1.6	C0G - 10pF - 470pF X7R - 330pF - 0.1µF	• 6.3, 10, 16, 25, 50, 100 and 200 volts • C0G/NP0, X7R Dielectrics • Tape and reel packaging available
Floating Electrode Design (FE-CAP)	0402/1.0 x 0.5 0603/1.6 x 0.8 0805/2.0 x 1.25 1206/3.2 x 1.6 1210/3.2 x 2.5 1812/4.5 x 3.2	X7R - 0.15 - 1.0nF X7R - 0.18 - 22nF X7R - 0.18 - 56nF X7R - 1.0 - 120nF X7R - 2.2 - 220nF X7R - 6.8 - 220nF	• Floating Electrode Design • 0402, 0603, 0805, 1206, 1210, 1812 Chip Sizes • 6.3, 10, 16, 25, 50, 100, 200, 250 volts • X7R dielectric • AEC-Q200 Qualified
High Voltage 0805 - 2225	See above	C0G - 1.0pF - .01µF X7R - 10pF - .22µF	• High Voltage - 500 – 3000 VDC • Ceramic Chip (+125°C) • Commercial, RoHS Compliant
Tip & Ring 0805 - 2225	See above	X7R - 1,000pF - 1.2µF	• 250 Volts • Operating Temperature -55° to +125°C • RoHS Compliant

Aluminum Surface Mount

Catalog F3102

Series	Case Size	Dimensions D x H (inches)	Cap Range	Characteristics
A700	V/7343-20	7.3 x 4.3 x 1.9	8.2 - 150µF	• Organic polymer for counterelectrode material • Pb Free • Extremely low-ESR, 7mΩ–28mΩ • 2 - 10 Volts • ±20% Capacitance tolerance • Tape & reel packaging
	D/7343-31	7.3 x 4.3 x 2.8	56.0 - 220µF	
	X/7343-43	7.3 x 4.3 x 4.0	100.0 - 470µF	

Tantalum Herm Seal • Polar • T110/T140 Series

Catalog F3100

Case Size	Dimensions D x L (inches)		Cap Range	Characteristics
	Uninsulated	*Insulated*		
A	.125 x .250	.135 x .286	.0047 - 12µF	• 6 - 125 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available • Available RoHS Compliant
B	.175 x .438	.185 x .474	.39 - 100µF	
C	.279 x .650	.289 x .686	2.7 - 470µF	
D	.341 x .750	.351 x .786	8.2 - 1200µF	

Tantalum Herm Seal • Polar • T2XX Series • (CSR/CSS Styles)

Catalog F3100

Case Size	Dimensions D x L (inches)		Cap Range	Characteristics
	Uninsulated	*Insulated*		
A	.125 x .250	.135 x .286	.0047 - 12µF	• 6 - 100 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available • MIL-PRF-39003/01/03/04/06/09/10 • 100% Surge Current Test Available
B	.175 x .438	.185 x .474	.39 - 100µF	
C	.279 x .650	.289 x .686	2.7 - 470µF	
D	.341 x .750	.351 x .786	8.2 - 1000µF	

Tantalum Herm Seal • Miniature • T222 Series (CSR09)

Catalog F3100

Case Size	Dimensions D x L (inches)		Cap Range	Characteristics
	Uninsulated	*Insulated*		
A	.085 x .245	.090 x .250	.047 - 2.7µF	• 6 - 75 Volts • ±20%; ±10%; ±5% Cap tolerance • MIL-PRF-39003/02 approved • 100% Surge Current Test Available • See KEMET F3067 for QPL information
B	.127 x .375	.138 x .390	.22 - 18µF	

Tantalum Molded • Axial • T32X Series (CX01 & CX05)

Catalog F3100

Case Size	Dimensions D x L X W (inches)	Cap Range	Characteristics
A	.095 x .260 x .020	.10 - 10µF	• 2 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available • MIL-PRF-49137/1 & 5 (CX01 & CX05) approved • Miniature - polar type • See KEMET F3067 for QPL information • Available RoHS Compliant
B	.110 x .290 x .020	.33 - 33µF	
C	.180 x .345 x .020	1.2 - 68µF	
D	.180 x .420 x .020	2.7 - 68µF	
E	.280 x .530 x .025	5.6 - 220µF	
F	.300 x .710 x .025	12.0 - 330µF	

Tantalum Molded • Radial • T330 Series

Catalog F3100

Case Size	Dimensions H x W X T (inches)	Cap Range	Characteristics
A	.345 x .230 x .105	.10 - 22µF	• 6 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available A - C case only
B	.225 x .285 x .170	.10 - 22µF	
C	.325 x .325 x .170	2.7 - 68µF	
D	.375 x .600 x .195	6.8 - 220µF	

Tantalum Molded • Radial • T340 Series

Catalog F3100

Case Size	Dimensions H x W X T (inches)	Cap Range	Characteristics
A	.287 x .185 x .165	.10 - 15µF	• 3 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available A - D case only • Available RoHS Compliant
B	.327 x 283 x .157	.39 - 47µF	
C	.413 x .287 x .169	2.7 - 100µF	
D	.413 x .484 x .287	6.8 - 220µF	
E	.413 x .484 x .484	22.0 - 330µF	
F	.413 x .484 x .287	6.8 - 220µF	

Tantalum Dipped • Radial • T35X Series

Catalog F3100

Case Size	Dimensions D x H (inches)	Cap Range	Characteristics
A	.175 x .280 - .400	.10 - 10µF	• 3 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available • Six lead configurations available • .10; .20; .25; and .125 lead spacing available • Available RoHS Compliant **Note:** "H" dimension is the range for all T35X Series. For specific "H" dimensions, refer to catalog F-3100
B	.175 x .300 - .410	.39 - 15µF	
C	.196 x .330 - .440	1.8 - 22µF	
D	.196 x .340 - .450	1.2 - 33µF	
E	.216 x .350 - .460	1.5 - 47µF	
F	.236 x .390 - .500	2.7 - 68µF	
G	.250 x .400 - .510	3.9 - 100µF	
H	.300 x .400 - .520	5.6 - 150µF	
J	.330 x .500 - .580	6.8 - 220µF	
K	.350 x .530 - .630	10.0 - 330µF	
L	.350 x .630 - .730	15.0 - 470µF	
M	.400 x .670 - .760	22.0 - 680µF	

Tantalum Dipped • Radial • T363/T369 Series (CX02 & CX09)

Catalog F3100

Case Size	Dimensions D x H (inches)	Cap Range	Characteristics
A	.175 x .350	.10 - 6.8µF	• 6 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available • MIL-PRF-49137 (CX02/CX12) approved (CX12 available A & B case) • See KEMET F3067 for QPL information
B	.250 x .450	1.5 - 68µF	
C	.350 x .610	6.8 - 150µF	
D	.400 x .740	22.0 - 330µF	

Tantalum Dipped • Radial • T368 Series

Catalog F3100

Case Size	Dimensions T x W X H (inches)	Cap Range	Characteristics
C	.250 x .400 x.420	5.6 - 150µF	• 6 - 50 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available
D	.250 x .460 x .520	18.0 - 330µF	

Tantalum Molded • Radial • T37X Series • (CX06) *Catalog F3100*

Case Size	Dimensions H x W X T (inches)	Cap Range	Characteristics
C	.225 x .185 x .075	.68 - 15µF	• 3 - 35 Volts • ±20%; ±10%; ±5% Cap tolerance • Tape & reel packaging available D - E case only • MIL-PRF-49137/6 (CX06) approved • See KEMET F3067 for QPL information
D	.290 x .220 x .110	2.2 - 47µF	
E	.310 x .230 x .130	6.8 - 68µF	
F	.475 x .375 x .150	10.0 - 220µF	

Tantalum Dipped • Radial • T396/T398 Series *Catalog F3100*

Case Size	Dimensions W x T x H (inches)	Cap Range	Characteristics
A	.280 x .190 x .310/.355	.10 - 10µF	• 3 - 50 Volts • ±20%; ±10% Capacitance tolerance • Tape & reel packaging available • Three lead design, fail-safe insertion • Available RoHS Compliant **Note:** "H" dimension is for both T396/T398
B	.280 x .190 x .320/.365	.47 - 15µF	
C	.280 x .200 x .360/.390	2.2 - 22µF	
D	.280 x .200 x .370/.390	3.3 - 33µF	
E	.280 x .230 x .380/.415	1.5 - 47µF	
F	.280 x .240 x .410/.430	3.3 - 68µF	
G	.280 x .250 x .420/.440	4.7 - 100µF	
H	.280 x .270 x .420/.440	22.0 - 150µF	
J	.300 x .300 x .460/.480	6.8 - 220µF	
K	.340 x .340 x .500/.500	10.0 - 330µF	
L	.340 x .340 x .560/.580	15.0 - 470µF	
M	.360 x .360 x .620/.620	22.0 - 680µF	

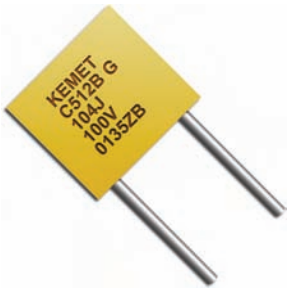
Tantalum High Reliability • GR500 Series *Catalog F2956*

For GR500 High Reliability specific information, refer to catalog F2956. See T2XX information above for case size dimensions.

Ceramic Molded • High Reliability *Catalog F3054*

Mil-PRF-123 (CKS Style) and GR900 specifications are included in the sections above. For detailed information for High Reliability products, refer to catalog F3054.

Ceramic Molded • Radial • (CK, CKR, CC, CCR, Styles) *Catalog F3101*



Case Size	Dimensions H x L x W (inches)	Cap Range	Characteristics
C052/56	.190 x .190 x .090	1.0pF - .10µF	• 50, 100 & 200 Volts • C0G/NP0 & X7R dielectrics • ±0.1pF; ±0.25pF; ±0.5pF; ±1%; ±2%; ±5%; ±10%; ±20% Capacitance tolerances • Tape & reel packaging available • MIL-C-11015; MIL-PRF-39014; MIL-PRF-20; & MIL-PRF-123 approved • GR900 High Reliability available • See KEMET F3067 for QPL information
C062/66	.290 x .290 x .090	360pF - 1.0µF	
C512	.480 x .480 x .140	2200pF - 2.2µF	
C522	.480 x .480 x .240	3900pF - 3.3µF	

Ceramic Molded • Axial • (CK, CKR, CC, CCR Styles) *Catalog F3101*

Case Size	Dimensions L x D (inches)	Cap Range	Characteristics
C114	.160 x .090	1.0pF - .010µF	• 50, 100 & 200 Volts • C0G/NP0 & X7R dielectrics • ±0.1pF; ±0.25pF; ±0.5pF; ±1%; ±2%; ±5%; ±10%; ±20% Capacitance tolerances available • Tape & reel packaging available • MIL-C-11015; MIL-PRF-39014; MIL-PRF-20 approved • See KEMET F3067 for QPL information
C124	.250 x .090	82pF - .047µF	
C192	.390 x .140	150pF - .27µF	
C202	.500 x .250	820pF - 1.0µF	
C222	.690 x .350	3900pF - 3.3µF	

Ceramic Conformally Coated • Radial • (Golden Max) *Catalog F3101*

Case Size	Dimensions L x H x T (inches)	Cap Range	Characteristics
C315	.150 x .210 x .100	1.0pF - .10µF	• 50, 100, 200, 500, 1000, 1500, 2000, 2500, 3000 Volts • C0G/NP0; X7R & Z5U dielectrics • ±0.5pF; ±1%; ±2%; ±5%; ±10%; ±20% & -20/+80% Capacitance tolerances available • Several lead configurations available • High voltage with standard lead spacing available • Various lead spacings available • Tape & reel packaging available (except no reeling C350 size)
C317	.150 x .230 x .100	1.0pF - .10µF	
C320	.200 x .260 x .125	1.0pF - .68µF	
C322	.200 x .260 x .125	1.0pF - .68µF	
C323	.200 x .320 x .125	1.0pF - .68µF	
C330	.300 x .360 x .150	10pF - 2.2µF	
C333	.300 x .390 x .150	10pF - 2.2µF	
C340	.400 x .460 x .150	47pF - 4.7µF	
C350	.500 x .560 x .200	100pF - 6.8µF	

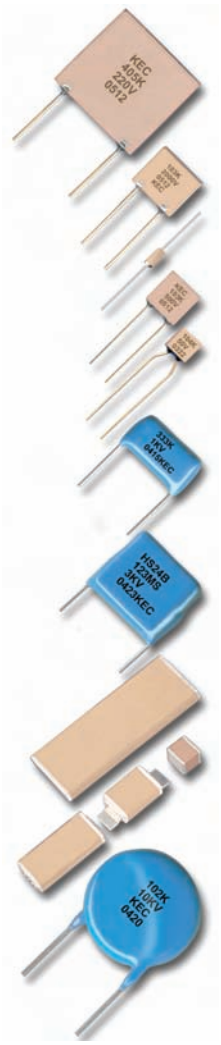
Ceramic Conformally Coated • Axial • (Aximax) *Catalog F3101*

Case Size	Dimensions L x D (inches)	Cap Range	Characteristics
C410	.170 x .100	1.0pF - .22µF	• 50 & 100 Volts • C0G/NP0; X7R & Z5U dielectrics • ±5%; ±10%; ±20% & -20/+80% Capacitance tolerances available • Tape & reel packaging available
C412	.170 x .120	1200pF - .33µF	
C420	.260 x .100	560pF - .47µF	
C430	.290 x .150	1800pF - 1.0µF	
C440	.400 x .150	5600pF - 2.2µF	

Ceramic Conformally Coated • Radial • High Voltage *Catalog F3101*

Case Size	Dimensions L x H x T (inches)	Cap Range	Characteristics
C617	.250 X .220 X .200	1.0 pF - .082µF	• 500, 1000, 1500, 2000, 2500 & 3000 Volts available • High voltage with lead spacing per MIL-PRF-49467 available • ±5%; ±10%; ±20%; 0/+100% & -20/+80% Capacitance tolerances available
C622/3	.320 x .280 x .250	1.0pF - .18µF	
C627/8	.370 x .300 x .250	1.0pF - .22µF	
C630/1	.450 x .220 x .200	10pF - .22µF	
C637/8	.470 x .400 x .270	10pF - .56µF	
C640/1	.550 x .280 x .250	47pF - .39µF	
C642/3	.500 x 560 x .200	100pF - .82µF	
C647/8	.570 x .500 x .270	47pF - 1.2µF	
C657/8	.670 x .600 x .270	150pF - 1.8µF	
C667/8	.770 x .720 x .270	270 pF - 2.7µF	

Ceramic High Temperature/High Voltage *Catalog F3106*



Style/Case Size	Voltage	Cap Range	Characteristics
HT05 - HT16 HP05 - HP16	100 & 200	C0G – 15pF - .10µF X7R – 1000pF - 1.0µF	• Ceramic High Temperature (+200°C) • Industrial, down hole, harsh environments • Axial/Radial • Conformal Coated (HP) available
HV10 - HV16	500 - 4000	C0G – 12pF - .015µF X7R – 270pF - .27µF	• Ceramic High Voltage - Radial • High temperature (+200°C) • Industrial, down hole, harsh environments
SCR/SRR/ SCA/SRA	50 - 200	C0G – 1.0pF - .12µF X7R – 100pF - 6.8µF	• Ceramic Cased High Temperature (+125°C) • Axial/Radial
ACR/ARR/ ACA/ARA	50 - 100	C0G – 1.0pF - .12µF X7R – 100pF - 3.3µF	• Ceramic Cased High Temperature (+200°C) • Axial/Radial
TCR/TRR/ TCA/TRA	50 - 100	C0G – 1.0pF - .12µF X7R – 100pF - 3.3µF	• Ceramic Cased High Temperature (+260°C) • Axial/Radial
VCR/VRR	500 - 5000	C0G – 10pF - .056µF X7R – 330pF - 1.2µF	• High Voltage - Radial • Ceramic Cased High Temperature (+200°C)
HV20 - HV36	500 - 10,000	C0G – 10pF - .33µF X7R – 150pF - 5.6µF	• High Voltage (125°C X7R, C0G) - Radial • Ceramic Conformal Coated
HV60 - HV66	600 - 5000	C0G – 12pF - .068µF X7R – 270pF - .47µF	• High Voltage • Ceramic Conformal Coated (+125°C) • Mil-PRF-49467 Equivalent
HS20 - HS36	500 - 10,000	C0G – 10pF - .18µF X7R – 220pF - 2.2µF	• High Voltage - Space Quality • Ceramic Conformal Coated (+125°C)
1515 - 6560	500 - 5000	C0G – 12pF - .10µF X7R – 270pF - 2.2µF	• High Voltage - Ceramic Chip (+125°C) • Military Equivalent MIL-PRF-49467
0805 - 2225	500 - 3000	C0G – 1.0pF - .01µF X7R – 10pF - .22µF	• High Voltage - Commercial, RoHS Compliant • Ceramic Chip (+125°C)
SM20 - SM36	500 - 10,000	C0G – 10pF - .33µF X7R – 150pF - 5.6µF	• High Voltage • Leaded Ceramic Chip (+125°C)
D30 - D120	3000 - 50,000	C0G – 1.2pF - 236pF X7R – 10pF - 7400pF X5U – 80pF - 17,300pF	• High Voltage • Disc Ceramic Chip (+125°C C0G/X7R; +85°C X5U)
2X - 6X	5000 - 20,000	C0G – 1.2pF - 141pF X7R – 37pF - 4400pF X5U – 80pF - 10,400pF	• High Voltage • Multiple Stacks Disc Ceramic Chip (+125°C C0G/X7R;+85°C X5U)

Surface Mount Inductors

Catalog F3115

Application	Construction	Series	Sizes	Inductance nH	Current Rating mA	Characteristics
Filtering on Signal Line	Wire Wound	L-SWS	0806	1.0 - 100	80 - 610	• High Q, high inductance values • narrow tolerance achieved with bottom surface electrodes
	Multi-layer	L-SMS	0402 - 1206	0.047 - 33	1 - 300	• High Q, low inductance values • Small case sizes
Noice Reduction on Power Supply Line	Wire Wound	L-PWS	0805 - 1207	1.0 - 1000	15 - 1075	• Available with super low DC resistance and high current ratings
		L-PWI	0805 - 1007	1.0 - 680	45 - 775	• High current
		L-PWF	0603	1.0 - 47	35 - 230	• High efficiency design with bottom suface electrodes
	Multi-layer	L-PMS	0603, 0805	0.10 - 10	50 - 500	• Multi-layer block structure yields higher reliability
Power Inductor for Switching Regulator	Wire Wound	L-DWL	0805	1.0 - 47	100 - 620	• Low profile, high current
		L-DWF	0603	1.0 - 47	50 - 290	• High efficiency design with bottom surface electrodes
		L-DWS	0805 - 1007	1.0 - 1000	25 - 1200	• Low DC resistance
		L-DWI	0805 - 1210	1.0 - 100	65 - 1440	• High Current
		L-DWD	3010 - 10050	0.9 - 220	220 - 9000	• High Current, low profile, original magnetically shielded, shock-proof structure
	Multi-layer	L-DMI	1008, 1206	1.0 - 4.7	700 - 1300	• Low profile, Low DC resistance
Radio Frequency Inductor	Multi-layer	L-RMS	0201 - 0805	1.0 - 470	40 - 300	• Designed for application above 100MHz, low inductance values, excellent Q and SRF properties

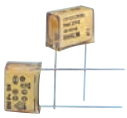
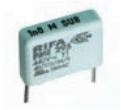
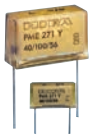
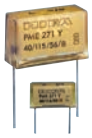
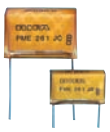
Ferrite Beads

Catalog F3115

Application	Construction	Series	Sizes	Impedance Ohms	Current Rating mA	Characteristics
EMI Suppression (Ferrite Beads)	Wire Wound	Z-PWS	0603 - 1806	8 - 100	2000 - 6000	• High current, several material combinations available to target specific frequency ranges
		Z-PWZ	0603 - 1812	30 - 2000	400 - 4000	• High current and impedance
	Multi-layer	Z-SMS	0201 - 0805	10 - 2500	100 - 1500	• Wide range of material types and broad impedance range targeted for signal lines
		Z-PMS	0402 - 0805	33 - 390	1000 - 4000	• For power lines, low DC resistance

EMI Metallized Paper (MP)

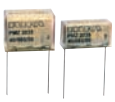
Catalog F3294

	Series	Class	Cap Range	Rated Voltage	Characteristics
	**PME271E**	X1	0.01 - 0.22 µF	300 VAC	• Test voltage (factory test) 2150 VDC • Climatic category 40/110/56/B • Max. dU/dt 400-1200 V/µs • Lead spacing 15.2, 20.3, 22.5, 25.4mm • Approvals ENEC, EN132400, UL 1283
	**PME278**	X1	0.001 - 0.15 µF	440 VAC	• Test voltage (factory test) 2700 VDC • Climatic category 40/110/56/B • Max. dU/dt 600-2000 V/µs • Lead spacing 10.2, 15.2, 20.3, 22.5, 25.4mm • Approvals ENEC, EN132400
	**PME271M**	X2	0.001 - 0.6 µF	275 VAC	• Test voltage (factory test) 2150 VDC • Climatic category 40/110/56/B • Max. dU/dt 400-1200 V/µs • Lead spacing 10.2, 15.2, 20.3, 22.5, 25.4mm • Approvals ENEC, EN132400, • UL 1283, UL 1414, CSA No.1
	**PME264**	X2	0.001 - 0.1 µF	660 VAC	• Test voltage (factory test) 3000 VDC • Climatic category 40/085/56/B • Max. dU/dt 600-2000 V/µs • Lead spacing 15.2, 20.3, 25.4mm • Approvals ENEC, EN132400, UL 1283
	**PMZ2074**	X2	C1: 150 - 220 µF C2: 0.033 - 0.1 µF	275 VAC	• Double capacitor, two capacitors in series • Test voltage (factory test) 2150 VDC • Climatic category 40/110/56/B • Lead spacing 20.3mm • Approvals ENEC, EN132400
	**PME295**	Y1	0.47 - 4.7 µF	440 VAC (ENEC) 480 VAC (UL)	• Test voltage (factory test) 4000 VAC • Climatic category 40/115/56/B • Max. dU/dt 2000 V/µs • Lead spacing 15.0mm • Approvals ENEC, EN132400 • UL 1283, UL 1414, cUL No.8, cUL No. 1
	**PME271Y**	Y2	0.001 - 0.1 µF	250 VAC	• Test voltage (factory test) 3000 VDC • Climatic category 40/100/56/B • Max. dU/dt 400-2000 V/µs • Lead spacing 10.2, 15.2, 20.3, 25.4mm • Approvals ENEC, EN132400, UL 1283, CSA No.8
	**PME271Y (A-E)**	Y2	0.001 - 0.15 µF	300 VAC	• Test voltage (factory test) 3000 VDC • Climatic category 40/115/56/B • Max. dU/dt 400-2000 V/µs • Lead spacing 10.2, 15.2, 20.3, 25.4mm • Approvals ENEC, EN132400, UL 1283, CSA No.8
	**PZB300**	X2 + 2×Y2	X2: 0.1 µF, 0.15 µF Y2: 0.0022 µF, 0.0033 µF, 0.0047 µF	275 VAC	• Delta capacitor, classes X2 and Y2 • Test voltage (factory test) X2: 2150 VDC; Y2: 3000VDC • Climatic category 40/100/56/B • Max. dU/dt X2: 600 V/µs; Y2: 1000 V/µs • Lead spacing 20mm • Approvals ENEC, EN132400, UL 1283, CSA No.8
	**PME261**	Gen. Purpose	0.0082 - 1.0 µF 0.001 - 0.15 µF 0.001 - 0.1 µF	220 VAC, 400 VDC 300 VAC, 630 VDC 500 VAC, 1000VDC	• Test voltage (factory test) 800 VDC/1250 VDC/2000 VDC • Climatic category 40/070/56 • Max. dU/dt 220-2000 V/µs • Lead spacing 10.2, 15.2, 20.3, 25.4mm
	**SMP253**	Y2	0.001 - 0.0047 µF	250 VAC	• SMD, size 5045 • Test voltage (factory test) 3000 VDC • Climatic category 40/100/56/B • Max. dU/dt 2000 V/µs • Approvals ENEC, EN132400, UL 1414, CSA No.1"

EMI Metallized Polypropylene (MKP) and Metallized Polyester (MKT) *Catalog F3294*

	Series	Class	Cap Range	Rated Voltage	Characteristics
	**PHE841 MKP**	X1	0.01 - 2.2 µF	330 VAC	• Test voltage (factory test) 3000 VDC • Climatic category 40/100/56/B • Max. dU/dt 100 V/µs • Lead spacing 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, CSA No.8, CSA No. 1
	**PHE844 MKP**	X1	0.1 - 2.2 µF	440 VAC (ENEC) 480 VAC (UL)	• Test voltage (factory test) 3000 VDC • Climatic category 40/105/56/B • Max. dU/dt 100 V/µs • Lead spacing 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, cUL No.8, cUL No. 1
	**PHE845 MKP**	X1	0.01-1.0 µF	760 VAC (ENEC) 600 VAC (UL)	• Test voltage (factory test) 4250 VDC • Climatic category 40/105/56/B • Max. dU/dt 100 V/µs • Lead spacing 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, cUL No.8
	**PHE820M MKT**	X2	0.01 - 2.2 µF	275 VAC	• Test voltage (factory test) 2150 VDC • Climatic category 40/100/56/B • Max. dU/dt 100 V/µs • Lead spacing 15, 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, CSA No.8, CSA No. 1
	**PHE820E MKT**	X2	0.01 - 2.2 µF	300 VAC	• Test voltage (factory test) 2150 VDC • Climatic category 40/100/56/B • Max. dU/dt 100 V/µs • Lead spacing 15, 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, CSA No.8, CSA No. 1
	**PHE840E MKP**	X2	0.01 - 10.0 µF	300 VAC	• Test voltage (factory test) 2200 VDC • Climatic category 55/105/56/B • Max. dU/dt 100 V/µs • Lead spacing 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, cUL No.8, cUL No. 1
	**PHE840M MKP**	X2	0.01 - 10.0 µF	275 VAC (ENEC) 280 VAC (UL)	• Test voltage (factory test) 2200 VDC • Climatic category 55/105/56/B • Max. dU/dt 100 V/µs • Lead spacing 7.5, 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, cUL No.8, cUL No. 1
	**PHZ9004 MKP**		3 x 1.0 µF	300 VAC	• Low profile triple capacitor for X2 three-phase applications • Test voltage (factory test) 2200 VDC • Climatic category 55/105/56 • Max. dU/dt 100 V/µs • Lead spacing 27.5, 37.5mm
	**PHE850 MKP**	Y2	0.01-1.0 µF	300 VAC (ENEC) 480 VAC (UL)	• Test voltage (factory test) 5000 VDC, 2500 VAC • Climatic category 55/110/56/B • Max. dU/dt 100 V/µs • Lead spacing 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC, EN132400, UL 1283, UL 1414, cUL No.8, cUL No. 1

EMI RC Units with Integrated Resistor, Metallized Paper (MP) *Catalog F3294*

	Series	Class	Cap Range	Rated Voltage	Characteristics
	**PMR205**		0.1 - 1.0 µF R: 22 - 680 Ω	125 VAC 250 VDC	• Test voltage (factory test) 375 VDC • Climatic category 40/085/56/B • Lead spacing 15.2, 20.3, 25.4mm
	**PMR209**	X2	0.047 - 0.47 µF R: 22 - 470 Ω	250 VAC 630 VDC	• Test voltage (factory test) 1800 VDC • Climatic category 40/085/56/B • Lead spacing 15.2, 20.3, 25.4mm • Approvals ENEC, EN132400, UL 1283
	**PMR210**	X1	0.022 - 0.1 µF R: 100 Ω	250 VAC	• Test voltage (factory test) 3000 VDC, 2000 VAC • Climatic category 40/085/56/B • Lead spacing 15.2, 20.3, 25.4mm • Approvals ENEC, EN132400, UL 1414
	**PMZ2035**	X1	0.1 µF R: 150 Ω	440 VAC	• Test voltage (factory test) 1800 VDC • Climatic category 40/085/56/B • Lead spacing 25.4mm • Approvals ENEC, EN132400

Pulse Capacitors, Polypropylene Film

Catalog F3294

Series	Dielectrics	Rated Voltage	Cap Range	Characteristics
 **PHE426**	Single Metallized	100 VDC/63 VAC 250 VDC/160 VAC 300 VDC/160 VAC 400 VDC/220 VAC 450 VDC/220 VAC 630 VDC/250 VAC 1000 VDC/250 VAC 1600 VDC/650 VAC 2000 VDC/700 VAC	0.001 - 0.22 µF 0.001 - 27 µF 0.033 - 18 µF 0.001 - 10 µF 0.1 - 3.9 µF 0.001 - 5.6 µF 0.0027 - 3.3 µF 0.0047 - 0.047 µF 0.001 - 0.027 µF	• Climatic category 55/105/56/B • Max. dU/dt 30-1500 V/µs • Lead spacing 5, 7.5, 10, 15, 22.5, 27.5, 37.5mm
 **PHE429**	Single Metallized	420 VDC/220 VAC 630 VDC/275 VAC	0.1 - 0.47 µF 0.047 - 0.15 µF	• Climatic category 55/110/56 • Max. dU/dt 150-250 V/µs • Lead spacing 15mm
 **PHE450**	Double Metallized	250 VDC/180 VAC 400 VDC/250 VAC 630 VDC/300/400 VAC 1000 VDC/375/600 VAC 1600 VDC/650 VAC 2000 VDC/700 VAC 2500 VDC/900 VAC 3000 VDC/1000 VAC	330 pF - 10 µF 330 pF - 5.6 µF 330 pF - 3.3 µF 390 pF - 2.2 µF 2.7 nF - 1.0 µF 1.0 nF - 0.68 µF 1 nF - 0.33 µF 1 nF - 0.22 µF	• Climatic category 55/105/56/B • Max. dU/dt 200-2500 V/µs • Lead spacing 7.5, 10, 15, 22.5, 27.5, 37.5mm
 **PHE448**	Film/Foil	1600 VDC/650 VAC 2000 VDC/700 VAC	1.5 - 22 nF 0.1 - 3.3 nF	• Climatic category 55/105/56 • Max. dU/dt 15000-25000 V/µs • Lead spacing 15mm
 **PFR**	Film/Foil	63 VDC/40 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/220 VAC 630 VDC/250 VAC 1000 VDC/250 VAC	100 - 22000 pF 100 - 10000 pF 100 - 6800 pF 100 - 6800 pF 100 - 4700 pF 100 - 680 pF	• Climatic category 55/100/56 • Max. dU/dt 1000 V/µs • Lead spacing 5mm

Coupling/Decoupling Capacitors, Polyester Film

Catalog F3294

Series	Dielectrics	Rated Voltage	Cap Range	Characteristics
 **MMK**	Metallized	50 VDC/30 VAC 63 VDC/40 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/220 VAC 1000 VDC/250 VAC	0.001 - 10.0 µF 0.001 - 82 µF 0.001 - 82 µF 0.001 - 39 µF 0.001 - 18 µF 0.001 - 6.8 µF 0.001 - 4.7 µF	• Climatic category 55/100/56 • Max. dU/dt 2-100 V/µs • Lead spacing 5, 7.5, 10, 15, 22.5, 27.5, 37.5mm

Stable High Temp Capacitors, Metallized PPS Film

Catalog F3294

Series	Dielectrics	Rated Voltage	Cap Range	Characteristics
 **SMR**	Metallized	50 VDC/30 VAC 63 VDC/40 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC	0.001 - 22 µF 0.001 - 22 µF 0.001 - 12 µF 0.001 - 3.9 µF 0.001 - 1.8 µF	• Climatic category 55/150/56 • Max. dU/dt 2-40 V/µs • Lead spacing 5, 7.5, 10, 15, 22.5, 27.5mm

SMD Film Capacitors

Catalog F3306

	Series	Rated Voltage	Cap Range	Size	Characteristics
	**MMC**	50 VDC/30 VAC 63 VDC/40 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC	1 - 15000 nF 1 - 4700 nF 1 - 3300 nF 1 - 1000 nF 1 - 470 nF	2220 - 6560 2824 - 6560 2220 - 6560 2220 - 6560 2824 - 6560	• Metallized Polyester (PET) • Climatic category 55/100/56 • Max. dU/dt 5-50 V/µs
	**GMC**	50 VDC/30 VAC 63 VDC/40 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/300 VAC	1 - 5600 nF 1 - 4700 nF 1 - 2200 nF 1 - 680 nF 1 - 330 nF 22 - 150 nF	2220 - 6560 2824 - 6560 2220 - 6560 2220 - 6560 2824 - 5045 4036 - 6560	• Metallized Polyethylene Naphthalate (PEN) • Climatic category 55/125/56 • Max. dU/dt 5-50 V/µs
	**GMW**	63 VDC/40 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/220 VAC	1 - 470 nF 1 - 220 nF 1 - 68 nF 1 - 15 nF 1 - 6.8 nF	2220	• Metallized Polyethylene Naphthalate (PEN) • Naked Capacitor • Climatic category 55/125/21 • Max. dU/dt 20-50 V/µs
	**GPC**	63 VDC/40 VAC 100 VDC/63 VAC 160 VDC/100 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/300 VAC 1000 VDC/350 VAC	0.47 - 1000 nF 0.47 - 1000 nF 0.47 - 680 nF 0.47 - 470 nF 0.47 - 220 nF 0.47 - 150 nF 0.47 - 68 nF	2824 - 6560	• Double sided metallized film as electrode • Plain Polyethylene Naphthalate (PEN) as dielectric • Climatic category 55/125/56 • Max. dU/dt 100-2200 V/µs
	**SMC**	50 VDC/30 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC	1 - 3300 nF 1 - 1500 nF 1 - 470 nF 1 - 220 nF	2824 - 6560	• Metallized Polyphenylene Sulphide (PPS) • Climatic category 55/125/56 • Max. dU/dt 2-40 V/µs
	**SMW**	50 VDC/30 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC	1 - 560 nF 1 - 180 nF 1 - 68 nF 1 - 22 nF	2220 - 2824	• Metallized Polyphenylene Sulphide (PPS) • Naked Capacitor • Climatic category 55/125/56 • Max. dU/dt 8-20 V/µs
	**SPC**	100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/250 VAC 630 VDC/350 VAC	0.47 - 680 nF 0.47 - 330 nF 0.47 - 150 nF 0.47 - 100 nF	2824 - 6560	• Double sided metallized film as electrode • Plain Polyphenylene Sulphide (PPS) as dielectric • Climatic category 55/125/56 • Max. dU/dt 150-2000 V/µs
	**SMP253**	250 VAC	1 - 4.7 nF	5045	• EMI Capacitor, Class Y2 • Metallized paper (MP) • Climatic category 40/100/56/B • Max. dU/dt 2000 V/µs

Dual-In-Line Film Capacitors

Catalog F3306

	Series	Rated Voltage	Cap Range	Type	Characteristics
	**MDC**	50 VDC/30 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/220 VAC	0.033 - 15 µF 0.033 - 10 µF 0.033 - 1.5 µF 0.033 - 0.47 µF 0.033 - 0.18 µF	SMD	• Metallized Polyester (PET) • Climatic category 55/125/56 • Lead spacing 10mm, 15mm
	**MDK**	50 VDC/30 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/220 VAC	0.033 - 15 µF 0.033 - 10 µF 0.033 - 1.5 µF 0.033 - 0.47 µF 0.033 - 0.18 µF	Through-hole	• Metallized Polyester (PET) • Climatic category 55/125/56 • Lead spacing 10mm, 15mm
	**MDS**	50 VDC/30 VAC 100 VDC/63 VAC 250 VDC/160 VAC 400 VDC/200 VAC 630 VDC/220 VAC	0.033 - 6.8 µF 0.033 - 5.6 µF 0.033 - 0.68 µF 0.033 - 0.33 µF 0.033 - 0.10 µF	SMD, low profile	• Metallized Polyester (PET) • Climatic category 55/125/56 • Lead spacing 10mm, 15mm

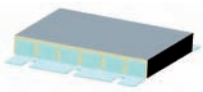
DC Film - Polyester Capacitors, Axial Style

Catalog F3301

Series	Dielectric/ Electrodes	Rated Voltage	Cap Range	Characteristics
A50	Polyester Met-allized film	50VDC/30VAC 63VDC/40VAC 100VDC/63VAC 250VDC/160VAC 400VDC/200VAC 630VDC/220VAC 1000VDC/250VAC	0.47 - 10.0µF 0.33 - 10.0µF 0.10 - 10.0µF 0.047 - 10.0µF 0.010 - 3.3µF 1000pF - 1.0µF 1000pF - 0.47µF	• D.C. multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 1.0 to 50 V/µs • Length (L) L = 11 to 33mm

DC Film - Polyester Capacitors, Radial Style

Catalog F3301



Series	Dielectric/ Electrodes	Rated Voltage	Cap Range	Characteristics
R82	Polyester Met-allized film	50VDC/30VAC 63VDC/40VAC 100VDC/63VAC 250VDC/140VAC (R.S.) 250VDC/160VAC 400VDC/160VAC (R.S.) 400VDC/200VAC	2.2 - 4.7µF 0.10 - 1.5µF 1000pF - 1.0µF 0.022 - 0.22µF 6800pF - 0.15µF 6800pF - 0.068µF 1000pF - 0.047µF	• D.C. multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 25 to 400V/µs • Pitch (p) p = 5 mm
RSB	Polyester Met-allized film	50VDC/30VAC 63VDC/40VAC 100VDC/63VAC 250VDC/160VAC 400VDC/200VAC 500VDC/220VAC 630VDC/220VAC	2.2µF 0.10 - 1.5µF 4700pF - 0.47µF 1000pF - 0.15µF 1000pF - 0.047µF 1000pF - 0.015µF 1000pF - 0.010µF	• High performances, High temperature, • D.C. and pulse applications • Climatic category (IEC 60068-1) 55/125/56 • Pulse rise time (dv/dt) 200 to 800V/µs • Pitch (p) p = 5 mm
R66	Polyester Met-allized film	50VDC/30VAC 63VDC/40VAC 100VDC/63VAC 250VDC/160VAC 400VDC/200VAC 630VDC/220VAC	0.68 - 4.7µF 0.33 - 3.3µF 0.068 - 1.5µF 0.022 - 0.33µF 6800pF - 0.15µF 1000pF - 0.047µF	• D.C. multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 40 to 300V/µs • Pitch (p) p = 7.5 mm
R60	Polyester Met-allized film	50VDC/30VAC 63VDC/40VAC 100VDC/63VAC 160VDC/90VAC 250VDC/160VAC 400VDC/200VAC 630VDC/220VAC 1000VDC/250VAC	1.5 - 5.6µF 0.68 - 220µF 0.33 - 150µF 0.33 - 150µF 0.10 - 68µF 0.015 - 33µF 4700pF - 10µF 1000pF - 4.7µF	• D.C. multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 0.8 to 200V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm
JSP	Polyester Met-allized film	63VDC/40VAC 100VDC/63VAC 160VDC/90VAC 250VDC/160VAC	4.7 - 470µF 3.3 - 220µF 2.2 - 100µF 1.0 - 56µF	• D.C. multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 15 to 40V/µs • Pitch (p) p = 22.5, 27.5, 37.5mm
JSN	Polyester Met-allized film	100VDC/63VAC 160VDC/90VAC 250VDC/160VAC	10 - 68µF 10 - 33µF 10 - 15µF	• DC/DC and AC/DC converters applications • Climatic category (IEC 60068-1) 55/125/56 • Pulse rise time (dv/dt) 27 to 40V/µs • Size from 60.80 to 60.160 (naked components)

(R.S.) = Reduced Sizes

SMD Film Capacitors

Catalog F3301

Series	Dielectric/ Electrodes	Rated Voltage	Size Code EIA	Cap Range	Characteristics
LDE*	PolyEthylene Naphtalate Metallized film	50VDC/40VAC 63VDC/40VAC 100VDC/63VAC 250VDC/120VAC 400VDC/160VAC** 630VDC/200VAC 1000VDC/250VAC	12.06 - 60.54 12.06 - 60.54 12.06 - 60.54 12.06 - 60.54 22.20 - 60.54 22.20 - 60.54 22.20 - 60.54	1000pF - 4.7µF 1000pF - 4.7µF 1000pF - 4.7µF 1000pF - 1.5µF 0.015µF - 0.47µF 1000 pF - 0.27µF 1000 pF - 0.1µF	• D.C. multipurpose applications • Climatic category (IEC 60068-1) 55/125/56 • Pulse rise time (dv/dt) 100V/µs (Vr ≤ 630VDC) • Pulse rise time (dv/dt) 300V/µs (Vr = 1000VDC)
LDB	PolyPhenylene Sulfide Metallized film	16VDC 50VDC	12.06 - 12.10 12.06 - 18.12	0.012µF - 0.1µF 3300pF - 0.1µF	• D.C. multipurpose applications • Special tolerances 2% to 5% • Climatic category (IEC 60068-1) 55/125/56

* for Rated Voltage ≥ 250VDC available special version ITU & Telcordia compliant.
** 400VDC/230VAC for 30 minutes (occasionally).

DC Film - Polypropylene Capacitors, Axial Style

Catalog F3301

Series	Dielectric/ Electrodes	Rated Voltage	Cap Range	Characteristics
A70	Polypropylene Metallized film	160VDC/90VAC 250VDC/200VAC 400VDC/220VAC 630VDC/250VAC	0.022µF - 4.7µF 0.010µF - 3.3µF 6800pF - 1.5µF 1000pF - 0.68µF	• Multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 1 to 30 V/µs • Length (L) L = 11 to 33mm
A72	Polypropylene Film-foil	100VDC/63VAC 250VDC/125VAC 400VDC/160VAC 630VDC/300VAC 1000VDC/400VAC 1500VDC/450VAC 2000VDC/500VAC	4700pF - 0.010µF 2200pF - 0.015µF 47pF - 0.010µF 0.015µF - 0.33µF 3300pF - 0.10µF 2200pF - 0.068µF 1000pF - 0.047µF	• High current applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 1800 to 27000V/µs • Length (L) L = 11 to 33mm

DC Film - Polypropylene Capacitors, Radial Style

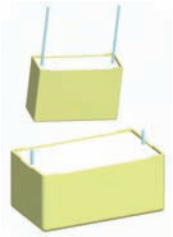
Catalog F3301

Series	Dielectric/Electrodes	Rated Voltage	Cap Range	Characteristics
R71	Polypropylene Metallized film	420VDC/220VAC 520VDC/250VAC 630VDC/275VAC 1000VDC/275VAC	0.010µF - 22µF 0.010µF - 22µF 0.010µF - 15µF 0.22µF - 10µF	• P.F.C. (Power Factor Correction) application • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 60 to 400V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm
R73	Polypropylene Film-foil	100VDC/63VAC 160VDC/90VAC 250VDC/125VAC 400VDC/160VAC 630VDC/300VAC 1000VDC/400VAC 1250VDC/450VAC 1600VDC/450VAC 2000VDC/500VAC	0.047µF - 0.15µF 0.033µF - 0.10µF 0.015µF - 0.047µF 0.010µF - 0.047µF 0.010µF - 2.2µF 3300pF - 1.5µF 2200pF - 0.82µF 1000pF - 0.56µF 100pF - 0.22µF	• High current applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 2400 to 54000V/µs • Pitch (p) p = 15, 22.5, 27.5, 37.5mm
R74	Polypropylene Metallized film	250VAC/630VDC 400VAC/1300VDC 500VAC/1600VDC 600VAC/2000VDC (Min.) 700VAC/2000VDC 900VAC/2200VDC	0.010µF - 0.15µF 2200pF - 3.3µF 1000pF - 2.2µF 470pF - 0.018µF 470pF - 1.0µF 1000pF - 0.47µF	• A.C. applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 180 to 10000V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm
R74 @ 125°C	Polypropylene Metallized film	500VAC/1600VDC 700VAC/2000VDC	1000pF - 0.10µF 680pF - 0.068µF	• A.C. applications • Climatic category (IEC 60068-1) 55/125/56 • Pulse rise time (dv/dt) 1200 to 9500V/µs • Pitch (p) p = 10, 15, 22.5mm
R75 H.P.	Polypropylene Metallized film	160VDC/70VAC (R.S.) 160VDC/90VAC 250VDC/140VAC (R.S.) 250VDC/160VAC 400VDC/200VAC (R.S.) 400VDC/220VAC 630VDC/220VAC (R.S.) 630VDC/250VAC 1000VDC/250VAC 1000VDC/400VAC 1250VDC/600VAC 1600VDC/650VAC 2000VDC/700VAC	0.10µF - 0.33µF 0.068µF - 33.0µF 0.068µF - 0.22µF 0.027µF - 33.0µF 0.027µF - 0.068µF 0.010µF - 15.0µF 0.010µF - 0.027µF 1000pF - 8.2µF 0.012µF - 3.9µF 220 pF - 8200µF 8200pF - 2.2µF 3900pF - 1.5µF 1000pF - 1.0µF	• D.C. and Pulse applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 35 to 9500V/µs • Pitch (p) p = 7.5, 10, 15, 22.5, 27.5 37.5mm
R76	Double sided metallized Polypropylene film	250VDC/180VAC 400VDC/250VAC 630VDC/250VAC 630VDC/400VAC 1000VDC/400VAC 1000VDC/600VAC 1600VDC/650VAC 2000VDC/700VAC	6800pF - 15.0µF 2700pF - 8.2µF 680pF - 0.012µF 3900pF - 5.6µF 220pF - 3300pF 470pF - 2.2µF 3300pF - 1.2µF 100pF - 0.68µF	• D.C. and Pulse applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 100 to 9500V/µs • Pitch (p) p = 7.5, 10, 15, 22.5, 27.5, 37.5mm
R77	Double sided metallized Polypropylene film	250VAC/630VDC 300VAC/800VDC 400VAC/1000VDC 500VAC/1300VDC 700VAC/1600VDC 900VAC/2000VDC	0.027µF - 0.10µF 0.010µF - 0.10µF 5600pF - 0.10µF 1000pF - 0.10µF 1000pF - 0.027µF 1000pF - 0.018µF	• A.C. applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 900V/µs to 9500V/µs • Pitch (p) p = 15mm, 22.5mm, 27.5mm
R79	Polypropylene Metallized film	160VDC/70VAC 250VDC/160VAC 400VDC/200VAC 630VDC/220VAC	0.039µF - 0.22µF 0.012µF - 0.15µF 3900pF - 0.047µF 1000pF - 0.018µF	• Multipurpose applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 100V/µs to 600V/µs • Pitch (p) p = 5mm
JSP	Polypropylene Metallized film	250VDC/160VAC 400VDC/200VAC 630VDC/220VAC	2.2µF - 56µF 1.5µF - 33µF 1.0µF - 22µF	• D.C. and A.C. pulse applications • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 40V/µs to 250V/µs • Pitch (p) p = 22.5mm, 27.5mm, 37.5mm

(Min.) = New Miniature version
(R.S.) = Reduced Sizes

DC Film - Interference Suppression

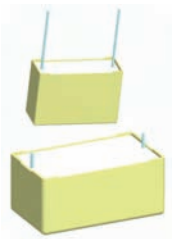
Catalog F3301



Series	Dielectric/Electrodes/Class	Rated Voltage	Cap Range	Characteristics
R46	Polypropylene Metallized film X2 Class	275VAC/560VDC @ 110°C 275VAC/560VDC @ 110°C (Min.) 300VAC/630VDC @ 110°C 275VAC/560VDC @ 125°C 275VAC/560VAC @ 110°C R46(S)	0.010 - 10µF 0.033 - 10µF 0.010 - 10µF 0.010 - 1.0µF 0.010 - 10µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110(125)/56 • Pulse rise time (dv/dt) 100 to 500 V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, GB/T 14472* cULus (UL 1414, CSA C22.2 N°1-N°8, UL 1283)
R47	Polypropylene Metallized film X1 Class	440VAC/1000VDC	4700pF - 2.2µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 150 to 750 V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, cULus (UL 1283, UL 1414)
R47	Polypropylene Metallized film X2 Class	440VAC/1000VDC @ 110°C 520VAC/1000VDC @ 85°C	4700pF - 2.2µF 4700pF - 2.2µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110(85)/56 • Pulse rise time (dv/dt) 150 to 750 V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, cULus (UL 1283, UL 1414)
R49	Polypropylene Metallized film X1 Class	310VAC/800VDC 330VAC/800VDC	0.010 - 2.2µF 0.047 - 6.8µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 100 to 600 V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, cULus (UL 1414, CSA C22.2 N°1-N°8, UL 1283)
R41	Polypropylene Metallized film Y2/X1 Class	300VAC/1000VDC	1000pF - 1.0µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 300 to 800 V/µs • Pitch (p) p = 7.5, 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, GB/T 14472 cULus (UL 1414, CSA C22.2 N°1-N°8, UL 1283)

DC Film - Interference Suppression - Capacitors with Discharge Resistor

Catalog F3301



Series	Dielectric/Electrodes/Class	Rated Voltage	Cap Range	Characteristics
R46+R	Polypropylene Metallized film X2 Class	275VAC/560 VDC 300VAC/630 VDC	0.22 - 10µF 0.22 - 10µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 100 to 200 V/µs • Pitch (p) p = 22.5, 27.5, 37.5mm • Discharge resistor 470kW to 10MW • Approvals ENEC IEC 60384-14, cULus (UL 1283, CSA-C22.2 N°8)
R49+R	Polypropylene Metallized film X1 Class	330VAC/800VDC	0.33µF/6.8µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 100 V/µs to 200 V/µs • Pitch (p) p = 27.5mm, 37.5mm • Discharge resistor 470kW to 10MW • Approvals ENEC IEC 60384-14, cULus (UL 1283, CSA-C22.2 N°8)

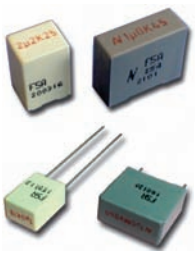
DC Film - RC Single Unit

Catalog F3301

Series	Dielectric/Electrodes	Rated Voltage	Cap Range	Characteristics
1.43	Polypropylene Metallized film	250 VDC/ 160VAC 400 VDC/ 200 VAC 630 VDC/ 220 VAC 275 VAC/560VDC Class X2	0.25 - 1.0µF 0.25 - 1.0µF 0.022 - 0.5µF 0.010 - 1.0µF	• RC Spark Suppression • Climatic category (IEC 60068-1) 55/105/56 • Climatic category (IEC 60068-1) 40/100/56 (275VAC) • Pitch (p) p = 15mm, 22.5mm, 27.5mm • Resistor value: 10W to 1kW • Approvals ENEC IEC 60384-14, UL 1414 (only for 275 VAC)

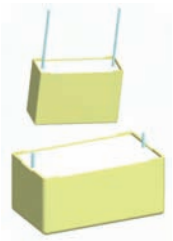
DC Film - Module

Catalog F3301



Series	Components	Rated Voltage	Cap Range	Characteristics
F5A	Polyester Metallized film Capacitor with integrated ceramic Varistor	5VDC to 63VDC (p=5mm) 5VDC to 63VDC (p=10mm)	0.1 - 2.2µF 0.1 - 1.5µF	• D.C motors suppression mainly in automotive applications • Climatic category (IEC 60068-1) 55/125/56 • Varistor voltage range 8VDC to 82VDC • Pitch (p) p = 5mm, 10mm
F5B	Polyester Metallized film Capacitor with integrated bidirectional suppressor diode	5VDC to 63VDC (p=5mm) 5VDC to 50VDC (p=5mm) 5VDC to 63VDC (p=10mm)	0.1 - 1.2µF 1.5 - 2.2µF 0.1 - 1.5µF	• D.C motors suppression mainly in automotive applications for very high performance peak reduction • Climatic category (IEC 60068-1) 55/125/56 • Diode Breakdown voltage range 10VDC to 78VDC • Pitch (p) p = 5mm, 10mm

DC Film - Capacitors for Capacitive Power Supply *Catalog F3301*



Series	Dielectric/ Electrodes/ Class	Rated Voltage	Cap Range	Characteristics
R46(S)	Polypropylene Metallized film X2 Class	275VAC/560 VDC	0.010 - 10µF	• Interference suppression applications designed for severe ambient condition • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 100 to 400 V/µs • Pitch (p) p = 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, GB/T 14472 cULus (UL 1414, CSA C22.2 N°1-N°8, UL 1283)
R47	Polypropylene Metallized film X1 Class	440VAC/1000VDC	4700pF - 2.2µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110/56 • Pulse rise time (dv/dt) 150 to 750 V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, cULus (UL 1283, UL 1414)
R47	Polypropylene Metallized film X2 Class	440VAC/1000VDC @ 110°C 520VAC/1000VDC @ 85°C	4700pF - 2.2µF 4700pF - 2.2µF	• Interference suppression and across-the-line applications • Climatic category (IEC 60068-1) 40/110(85)/56 • Pulse rise time (dv/dt) 150 to 750 V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm • Approvals ENEC IEC 60384-14, cULus (UL 1283, UL 1414)
R752	Polypropylene Metallized film	230VAC/400VDC	0.033 - 6.8µF	• Specifically designed for AC application in serial with the main • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 70 to 1000V/µs • Pitch (p) p = 10, 15, 22.5, 27.5, 37.5mm
R75L	Polypropylene Metallized film	250VAC/560VDC	0.010 - 10µF	• Specifically designed for AC application in serial with the main • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 90 to 1500V/µs • Pitch (p) p = 10, 15, 22.5, 27.5 37.5mm
R603	Polyester Metallized film	300VAC/560VDC	0.15 - 6.8µF	• Specifically designed for AC application in serial with the main • Climatic category (IEC 60068-1) 55/105/56 • Pulse rise time (dv/dt) 100 to 200V/µs • Pitch (p) p = 22.5, 27.5 37.5mm

(Min.) = New Miniature version
(S) = Special application
* no GB/T 14472 approval for R46 @ 125°C

Capacitors for A.C. Motor Run Applications, Metallized Polypropylene *Catalog F3307*

Series	Capacitor Type	Rated Voltage	Cap Range	Characteristics
C27	Cylindrical plastic case	420VAC cl.A / 470VAC cl.B 420VAC cl.B / 470VAC cl.C 275VAC cl.B / 425VAC cl.D	1 - 70µF 1 - 100µF 1 - 120µF	• Climatic category (IEC60068-1) -25/85/21 or -25/100/21 • Class of Safety Protection: P0 • Diameter (D) D = 25 to 60mm • Height (H) H = 55 to 120mm • Terminals: Faston - Unipolar Wires - Bipolar Cable • Mechanical connection: With/Without Bolt - Quick Fitting
C28	Cylindrical plastic case	420VAC cl.A / 470VAC cl.B	2 - 11µF	• Climatic category (IEC 60068-1) -25/85/21 • Class of Safety Protection: P2 • Diameter (D) D = 25 to 35mm • Height (H) H = 55 to 74mm • Terminals: Faston - Unipolar Wires - Bipolar Cable • Mechanical connection: With/Without Bolt - Quick Fitting
C87	Cylindrical aluminium case	420VAC cl.A / 470VAC cl.B 420VAC cl.B / 470VAC cl.C 280VAC cl.B	1 - 80µF 1 - 120µF 1 - 130µF	• Climatic category (IEC60068-1) -25/85/21 or -25/100/21 • Class of Safety Protection: P2 • Diameter (D) D = 25 to 60mm • Height (H) H = 48 to 133mm • Terminals: Faston - Bipolar Cable • Mechanical connection: With/Without Bolt
C24	Box plastic case	460VAC C24.6 275VAC C24.K 350VAC C24.B 650VAC C24.7 230VAC C24.2 400VAC C24.4 (valid 2009)	0.2 - 9.0µF 0.47 - 20.0µF 0.4 - 15.0µF 0.1 - 3.0µF 0.68 - 30.0µF 0.33 - 10.0µF	• Climatic category (IEC60068-1) -40/85(100)/21 • Class of Safety Protection: P0 • Pitch (p) p = 22.5, 27.5, 37.5mm • Pulse rise time (dv/dt) 30 to 50V/µs

Power Electronics and A.C. Film Capacitors, Metallized Polypropylene *Catalog F3303*

Series	Capacitor type	Rated Voltage	Cap Range	Characteristics
C4C	Axial	850VDC/450VAC 1200VDC/500VAC 2000VDC/630VAC 3000VDC/750VAC	0.1 - 2.5µF 0.047 - 1.5µF 0.022 - 0.68µF 6800pF - 0.22µF	• Snubber applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 200 to 2100V/µs • Length (L) L = 33 to 58mm
C4G	Axial	250VDC/160VAC 400VDC/250VAC 600VDC/330VAC 700VDC/400VAC 850VDC/450VAC	1 - 40µF 0.47 - 20µF 0.47 - 10µF 0.47 - 6.8µF 0.15 - 4.0µF	• Switching applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 15 to 210V/µs • Length (L) L = 20.5 to 58mm
C4H	Axial flat	850VDC/450VAC 1200VDC/500VAC 2000VDC/630VAC 3000VDC/750VAC	0.1 - 1.0µF 0.047 - 0.68µF 0.022 - 0.33µF 6800pF - 0.1µF	• Snubber applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 190 to 2100V/µs • Length (L) L = 33 to 58mm
C4M	Axial flat	250VDC/160VAC 400VDC/250VAC 600VDC/330VAC 700VDC/400VAC	1 - 20µF 0.47 - 6.8µF 0.47 - 4.7µF 0.47 - 3.0µF	• Switching applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 15 to 80V/µs • Length (L) L = 20.5 to 58mm
C4AS	Box	850VDC/500VAC 1000VDC/600VAC 1200VDC/630VAC 2000VDC/700VAC 3000VDC/750VAC	0.15 - 5.0µF 0.15 - 4.7µF 0.1 - 3.5µF 0.033 - 1.5µF 0.022 - 0.82µF	• Snubber applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 469 to 3360V/µs • Pitch (p) p = 27.5, 37.5, 52.5mm • Terminals Tinned copper 2 or 4 wires
C4AT	Box	250VDC/160VAC 400VDC/250VAC 450VDC/275VAC 600VDC/350VAC 700VDC/400VAC 850VDC/450VAC	1.0 - 60µF 1.0 - 40µF 1.0 - 33µF 0.68 - 20µF 0.47 - 15µF 0.22 - 10µF	• Switching applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 15 to 148V/µs • Pitch (p) p = 27.5, 37.5, 52.5mm • Terminals Tinned copper 2 or 4 wires
C4AE	Box	450VDC 700VDC 900VDC 1100VDC	30 - 100µF 15 - 55µF 12 - 40µF 8.0 - 25µF	• DC-Link applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 10 to 21V/µs • Pitch (p) p = 37.5, 52.5mm • Terminals Tinned copper 2 or 4 wires
C4AF	Box	250VAC 300VAC 350VAC 400VAC 450VAC	2.5 - 75µF 2.0 - 55µF 1.2 - 35µF 0.82 - 25µF 0.5 - 14µF	• AC Filter applications • Climatic category (IEC 60068-1) 40/85/21 • Pulse rise time (dv/dt) 12 to 62V/µs • Pitch (p) p = 27.5, 37.5, 52.5mm • Terminals Tinned copper 2 or 4 wires
C4BS	IGBT box	850VDC/550VAC 1000VDC/600VAC 1200VDC/630VAC 2000VDC/700VAC 3000VDC/750VAC	0.47 - 5.0µF 0.47 - 4.0µF 0.33 - 3.3µF 0.10 - 1.5µF 0.047 - 0.82µF	• Snubber-IGBT applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 469 to 3361V/µs • Box Length (L) L = 32 to 57.5mm • Terminals Tinned brass lugs
C4BT	IGBT box	250VDC/160VAC 400VDC/250VAC 600VDC/330VAC 700VDC/400VAC 850VDC/450VAC	4.7 - 60µF 3.3 - 40µF 2.5 - 20µF 1.5 - 15µF 1.0 - 10µF	• Switching-IGBT applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 27 to 148V/µs • Box Length (L) L = 32 to 57.5mm • Terminals Tinned brass lugs
C4DC	Flat cylindrical plastic case (Low inductance)	850VDC/500VAC 1000VDC/600VAC 1400VDC/700VAC	1.5 - 6.0µF 1.0 - 4.0µF 0.5 - 4.0µF	• Snubber-GTO applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 380 to 1000V/µs • Diameter (D) D = 60 to 90mm • Height (H) H = 51 to 64mm • Hole M8 threaded (M6 on request)
C4DR	Flat cylindrical plastic case (Low inductance)	400VDC/160VAC 600VDC/220VAC 700VDC/250VAC 850VDC/330VAC 1200VDC/440VAC 1500VDC/500VAC	25 - 220µF 12 - 100µF 7.5 - 70µF 4.0 - 60µF 2.5 - 25µF 1.0 - 15µF	• Clamper-GTO applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 12 to 400V/µs • Diameter (D) D = 60 to 90mm • Height (H) H = 51 to 99mm • Hole M8 threaded (M6 on request)
C4DE	Flat cylindrical plastic case (Low inductance)	400VDC 600VDC 800VDC 1000VDC	175 - 380µF 100 - 220µF 68 - 140µF 47 - 100µF	• DC-Link applications • Climatic category (IEC 60068-1) 40/85/21 • Pulse rise time (dv/dt) 15 to 37V/µs • Diameter (D) D = 84mm • Height (H) H = 40, 51, 64mm • Terminals: M6 or M8 threaded bolt (also available with threaded female connections)

Power Electronics and A.C. Film Capacitors, Metallized Polypropylene *Catalog F3303*

Series	Capacitor type	Rated Voltage	Cap Range	Characteristics
C44A	Aluminium case	400VDC/250VAC 600VDC/330VAC 700VDC/400VAC 850VDC/450VAC 1200VDC/500VAC 1500VDC/630VAC	15 - 330µF 10 - 100µF 5 - 100µF 3 - 60µF 1.0 - 22µF 1.0 - 15µF	• General Purpose applications • Climatic category (IEC 60068-1) 40/85/21 • Pulse rise time (dv/dt) 10 to 400V/µs • Diameter (D) D = 45 to 85mm • Height (H) H = 80 to 200mm • Terminals Tinned brass fastons or screws
C44B	Aluminium case	1200VDC/500VAC 2000VDC/630VAC 2400VDC/1000VAC	0.10 - 1.5µF 0.047 - 0.68µF 0.10 - 4.0µF	• Snubber applications • Climatic category (IEC 60068-1) 40/85/21 • Pulse rise time (dv/dt) 500 to 750V/µs • Diameter (D) D = 25 to 65mm • Height (H) H = 60 to 200mm • Terminals Tinned brass fastons or screws
C44E	Aluminium case	400VDC/250VAC 600VDC/380VAC 750VDC/440VAC 1200VDC/550VAC	150 - 400µF 100 - 200µF 100 - 120µF 50 - 60µF	• AC Filter applications • Climatic category (IEC 60068-1) 25/70/21 • Pulse rise time (dv/dt) 10 to 30V/µs • Diameter (D) D = 76 to 85mm • Height (H) H = 137 to 270mm • Terminals Tinned brass fastons or screws
C44H	Aluminium case	400VDC/250VAC 600VDC/330VAC 700VDC/400VAC	15 - 120µF 15 - 56µF 30 - 55µF	• UPS Filtering applications • Climatic category (IEC 60068-1) 40/85/21 • Pulse rise time (dv/dt) 15 to 30V/µs • Diameter (D) D = 45 to 75mm • Height (H) H = 61 to 150mm • Terminals: Tinned double Faston 6.3 mm
C44P-C20A	Aluminium case	400VDC/250VAC 500VDC/330VAC 750VDC/440VAC 750VDC/550VAC 900VDC/640VAC 1100VDC/780VAC	200 - 600µF 100 - 600µF 100 - 300µF 22 - 150µF 15 - 150µF 10 - 100µF	• AC Filter applications • Climatic category (IEC 60068-1) 25/70/56 • Pulse rise time (dv/dt) 15 to 30V/µs • Diameter (D) D = 65 to 116mm • Height (H) H = 115 to 280mm • Terminations Plastic Insulator with screw terminals M10 • Safety device
C44U	Aluminium case	700VDC 900VDC 1100VDC 1300VDC	120 - 550µF 75 - 600µF 50 - 500µF 50 - 550µF	• DC-Link applications • Climatic category (IEC 60068-1) 40/85/21 • Pulse rise time (dv/dt) 6 to 31V/µs • Diameter (D) D = 76, 85mm • Height (H) H = 55 to 140mm • Terminals Tinned brass screws
C93	Aluminium case	400VDC/320VAC 600VDC/415VAC	50 - 100µF 10 - 100µF	• P.F.C. and Filter applications • Pulse rise time (dv/dt) 30V/µs • Diameter (D) D = 40 to 75mm • Height (H) H = 78 to 150mm • Terminals Tinned brass fastons or screws • Safety device - Approval IMQ, UL
C9T	Aluminium case	415VAC 450VAC 525VAC 690VAC	3x30.8µF - 3x184.8µF 3x26.2µF - 3x157µF 3x19.2µF - 3x115µF 3x27.9µF - 3x66.8µF	• P.F.C. & AC Filter applications - Three phase execution • Pulse rise time (dv/dt) 30V/µs • Diameter (D) D = 60 to 116mm • Height (H) H = 150 to 280mm • Terminals Tinned brass fastons or screws • Safety device - Approval UL

Capacitors for A.C. Lighting Applications, Metallized Polypropylene *Catalog F3308*

Series	Capacitor type	Rated Voltage	Cap Range	Characteristics
C3B	**Cylindrical plastic case**	250 VAC	2µF - 50µF	• Lighting applications • Temperature Range -25/+85°C • Diameter (D) D = 25mm to 50mm • Height (H) H = 48mm to 133mm • Terminals: Unipolar Wires - Push in Connector • Mechanical connection: With/Without Bolt - Quick Fitting • Type of Capacitor (ENEC03): Type A
C95	**Cylindrical aluminium case**	250VAC 450VAC	2.0µF - 60µF 2.5µF - 6.8µF	• Lighting applications • Temperature Range -25/+85°C and -25/+100°C • Diameter (D) D = 25mm to 50mm • Height (H) H = 55mm to 120mm • Terminals: Faston 2,8mm - Push in Connector • Mechanical connection: With/Without Bolt - Quick Fitting • Type of Capacitor (ENEC03): Type B

Axial Electrolytic Capacitors

Catalog F3304

	Type code	Rated Temperature	Voltage range	Cap range	Applications	Characteristics
	**PEG226**	150°C	25 - 63VDC	250 - 4700µF	Automotive	• Extremely high ripple current • Up to 28A-ripple (RMS, Continuous load) • High vibration resistance
	**PEG225**	150°C	25 - 63VDC	470 - 6300µF	Automotive	• Extremely high ripple current • Up to 28A-ripple (RMS, Continuous load) • High vibration resistance • High CV
	**PEG220**	150°C	25 - 63VDC	250 - 4700µF	Automotive	• Very high ripple current • Up to 21A-ripple (RMS, Continuous load) • High vibration resistance
	**PEG124**	105°C 125°C	200 - 450VDC 10 - 100VDC	1 - 150µF 4.7 - 4700µF	Electronic Ballast Industrial Automotive Telecom	• Long life > 30 years at 50°C • Low ESR • Low ESL
	**PEG126**	150°C	25 - 63VDC	250 - 4000µF	Automotive	• Low ESR • High ripple current • Intermittent specification • Resistance to vibrations • 150°C, 2000h (Ø20)
	**PEH126**	150°C	25 - 63VDC	250 - 1500µF	Automotive	• Low ESR • High ripple current • Intermittent specification • Resistance to vibrations 150°C, 1500h

Screw Terminal Electrolytic Capacitors

Catalog F3304

	Type Code	Temperature Range	Voltage Range	Cap Range	Life Expectancy @ Rated Voltage, Rated Temperature	Characteristics
	**ALS30/31**	-40 to +85°C	25 to 500VDC	100 to 680000µF	40,000 hours	• Case sizes & Terminals for the European market • 20000hours life at 85°C (Ur, Ir applied) • High ripple current • Excellent surge voltage capability
	ALS32/33	-40 to +85°C	350 to 500VDC	220 to 18000µF	40,000hours	• Case sizes & Terminals for the Asian market • 20000hours life at 85°C (Ur, Ir applied) • High ripple current • Excellent surge voltage capability
	**ALS34/35**	-40 to +85°C	25 to 500VDC	150 to 470000µF	40,000hours	• Case sizes & Terminals for the American market • 20000hours life at 85°C (Ur, Ir applied) • High ripple current • Excellent surge voltage capability
	PEH200	-40 to +85°C	25 to 550VDC	100 to 330000µF	60,000hours	• High CV-value • Long life • Low ESR & ESL • Compact Size
	PEH169	-40 to +85°C	10 to 550VDC	68 to 470000µF	78,000hours	• High CV-value • Long life • Low ESR & ESL • Compact Size
	**ALS40/41**	-40 to +105°C	25 to 450VDC	150 to 680000µF	15,000hours	• Compact size • 9000hours life at 105°C (Ur, Ir applied) • High ripple current • Excellent surge voltage capability
	PEH169	-40 to +105°C	10 to 350VDC	100 to 330000µF	25,000hours	• High CV-value • Long life • Low ESR & ESL • Compact Size
	PEH205	-55 to +125°C	16 to 63VDC	2200 to 390000µF	Up to 8,000 hours (@ Ur, Ir, +125°C)	• High temperature +125°C • Long life • Low ESR & ESL • Compact Size

Snap-in Electrolytic Capacitors

Catalog F3304

Type Code	Temperature Range	Voltage Range	Cap Range	Life Expectancy @ Rated Voltage, Rated Temperature	Characteristics
ALC10	-40 to +85°C	40 to 450VDC	56 to 82000µF	29,000 hours	• Compact size • 18000hours life at 85°C (Ur, Ir applied) • High ripple current • Excellent surge voltage capability
ALC12	-40 to +85°C	200 to 450VDC	150 to 8200µF	9,000hours	• Compact size • 2000hours life at 85°C (Ur, Ir applied) • Excellent surge voltage capability
PEH506	-40 to +85°C	35 to 450VDC	68 to 27000µF	6,000hours	• Long life grade • PCB mounting • Low ESR & ESL • High ripple current
ALC40	-40 to +105°C	25 to 450VDC	47 to 120000µF	14,000hours	• Compact size • 9000hours life at 105°C (Ur, Ir applied) • High ripple current • Excellent surge voltage capability
ALC42	-40 to +105°C	200 to 450VDC	120 to 6800µF	11,000hours	• Compact size • 2000hours life at 105°C (Ur, Ir applied) • Excellent surge voltage capability
PEH532	-40 to +105°C	35 to 450VDC	68 to 27000µF	2,000hours	• Long life grade • PCB mounting • Low ESR & ESL • High ripple current
PEH534	-40 to +105°C	35 to 450VDC	150 to 22000µF	4,000hours	• Long life grade • PCB mounting • Low ESR & ESL • High ripple current
PEH536	-40 to +105°C	35 to 450VDC	47 to 18000µF	6,000hours	Long life grade PCB mounting Low ESR & ESL High ripple current
PEH526/626	-40 to +125°C	25 to 80VDC	820 to 6800µF	4,000hours	• 125°C temperature rating • High vibration specification • Low ESR • High ripple current capability

Other Electrolytic Capacitors

Catalog F3304

Type Code	Temperature Range	Voltage Range	Cap Range	Life Expectancy @ Rated Voltage, Rated Temperature	Characteristics
ALN20S	-40 to +85°C	50 to 100VDC	10000µF	29,000 hours	• 4 Pin Solder Tag • Long life • Slit foil Technolgy
ALC10S	-40 to +85°C	50 to 100VDC	10000µF	29,000 hours	• 2 Pin Solder Tag • Long life • Slit foil Technolgy
ALP/T 20	-40 to +85°C	40 to 450VDC	22 to 150000µF	26,000hours	• Solder Tag & DIN standard solder pin • Long Life
ALP/T 22	-40 to +85°C	40 to 450VDC	22 to 150000µF	26,000hours	• Solder Tag & DIN standard solder pin • Long Life
MS/MD	-20 to +60°C MS type, -20% +70°C MD types	120 to 260VAC	25 to 750µF		• AC Motor Start Capacitors • 6.3mm double amp tags (quick connect type) • VDE approved to EN60252-2

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