

- Metallized polyester (PET) SMD
- According to IEC 60384-19

## TYPICAL APPLICATIONS

Bypassing, signal coupling. General purpose for highest reliability.

## CONSTRUCTION

Polyester (PET) film capacitor for surface mounting. Encapsulation in self-extinguishing material meeting the requirements of UL 94V-0.

## TECHNICAL DATA

<b>Rated voltage <math>U_R</math>, VDC</b>	50	63	100	250	400
<b>Rated voltage <math>U_R</math>, VAC</b>	30	40	63	160	200
<b>Capacitance range, nF</b>	1 - 15000	1 - 4700	1 - 3300	1 - 1000	1 - 470

**Capacitance tolerance** ± 10%, ±5%; other tolerances on request.

**Category temperature range** -55°C to +100°C

**Rated temperature** +85°C

**Voltage derating** The rated voltage is decreased with 1.25%/°C from +85°C.

**Climatic category** 55/100/56

**Test voltage** 1.6 x  $U_R$ , 60s

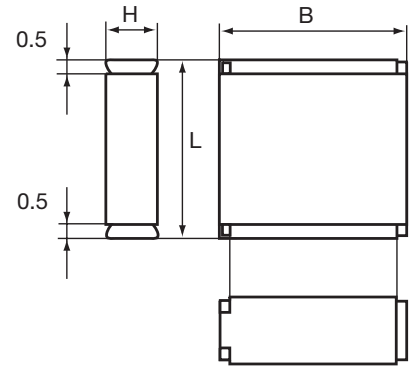
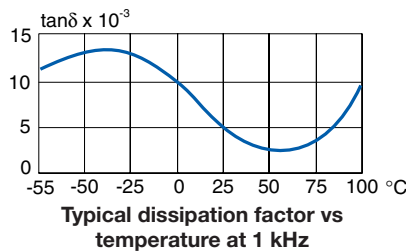
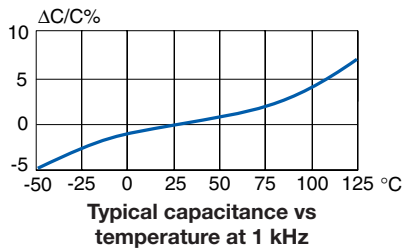
**Insulation resistance** Minimum value between terminals  
Measured at +20°C according to IEC 60384-19

	$C \leq 0.33 \mu\text{F}$	$C > 0.33 \mu\text{F}$
$U_R \leq 100 \text{ V}$	10 000 MΩ	3000 s
$U_R > 100 \text{ V}$	30 000 MΩ	10 000 s

**Dissipation factor** Max values at +23°C

	$C \leq 100\text{nF}$	$100\text{nF} < C < 1\mu\text{F}$	$1\mu\text{F} \leq C \leq 10\mu\text{F}$	$C > 10\mu\text{F}$
1 kHz	0.8%	0.8%	0.8%	0.8%
10 kHz	1.2%	1.2%	1.5%	3.0%
100 kHz	2.5%	3.0%		

**Pulse rise time** The capacitors can withstand an unlimited number of pulses with a  $dU/dt$  according to article table. For voltages (U) lower than the rated voltage ( $U_R$ ), the specified  $dU/dt$  can be multiplied by  $U_R/U$ .

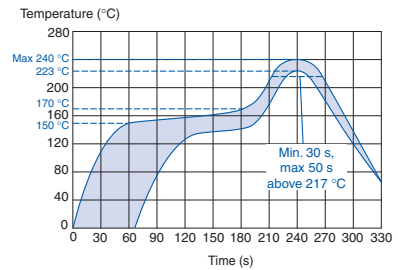


Components may be vertically mounted for decreased footprint. See page 20.

## RECOMMENDED SOLDERING CONDITIONS

**Reflow soldering temperature measured on the top body surface of the component**

Preheating temperature should be less than 170°C. The time above 217°C should be less than 50 s. The peak temperature must not exceed 240°C.



## MARKING

- Rated capacitance
- Capacitance tolerance code
- Rated voltage code
- Capacitor type M for MMC
- Manufacturing date code according to IEC 60062 (year, month)

See also page 18.

## ORDERING INFORMATION

See article table and page 10 for options and article code construction.

## ARTICLE TABLE

Capacitance $\mu\text{F}$	Size code	Dimensions in mm $\pm 0.2$		Max dU/dt V/ $\mu\text{s}$	Article code	Capacitance $\mu\text{F}$	Size code	Dimensions in mm $\pm 0.2$		Max dU/dt V/ $\mu\text{s}$	Article code
		B	H					B	H		
<b>50 VDC/30 VAC</b>						<b>50 VDC/30 VAC</b>					
<b>CHIP LENGTH 5.7 MM CODE 2220</b>						<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.0010	J31	5.0	2.5	40	MMC5.7 102K50J31 TR12	0.33	K35	6.0	3.5	25	MMC7.3 334K50K35 TR12
0.0012	J31	5.0	2.5	40	MMC5.7 122K50J31 TR12	0.39	K35	6.0	3.5	25	MMC7.3 394K50K35 TR12
0.0015	J31	5.0	2.5	40	MMC5.7 152K50J31 TR12	0.47	K35	6.0	3.5	25	MMC7.3 474K50K35 TR12
0.0018	J31	5.0	2.5	40	MMC5.7 182K50J31 TR12	0.56	K37	6.0	4.5	12	MMC7.3 564K50K37 TR12
0.0022	J31	5.0	2.5	40	MMC5.7 222K50J31 TR12	0.68	K37	6.0	4.5	12	MMC7.3 684K50K37 TR12
0.0027	J31	5.0	2.5	40	MMC5.7 272K50J31 TR12	0.82	K37	6.0	4.5	12	MMC7.3 824K50K37 TR12
0.0033	J31	5.0	2.5	40	MMC5.7 332K50J31 TR12	1.0	K37	6.0	4.5	12	MMC7.3 105K50K37 TR12
0.0039	J31	5.0	2.5	40	MMC5.7 392K50J31 TR12	<b>CHIP LENGTH 10.2 MM CODE 4036</b>					
0.0047	J31	5.0	2.5	40	MMC5.7 472K50J31 TR12	0.022	A31	9.1	5.5	40	MMC10.2 223K50A31 TR16
0.0056	J31	5.0	2.5	40	MMC5.7 562K50J31 TR12	0.027	A31	9.1	5.5	40	MMC10.2 273K50A31 TR16
0.0068	J31	5.0	2.5	40	MMC5.7 682K50J31 TR12	0.033	A31	9.1	5.5	40	MMC10.2 333K50A31 TR16
0.0082	J31	5.0	2.5	40	MMC5.7 822K50J31 TR12	0.039	A31	9.1	5.5	40	MMC10.2 393K50A31 TR16
0.010	J31	5.0	2.5	40	MMC5.7 103K50J31 TR12	0.047	A31	9.1	5.5	40	MMC10.2 473K50A31 TR16
0.012	J31	5.0	2.5	40	MMC5.7 123K50J31 TR12	0.056	A31	9.1	5.5	40	MMC10.2 563K50A31 TR16
0.015	J31	5.0	2.5	30	MMC5.7 153K50J31 TR12	0.068	A31	9.1	5.5	40	MMC10.2 683K50A31 TR16
0.018	J31	5.0	2.5	30	MMC5.7 183K50J31 TR12	0.082	A31	9.1	5.5	40	MMC10.2 823K50A31 TR16
0.022	J31	5.0	2.5	30	MMC5.7 223K50J31 TR12	0.10	A31	9.1	5.5	30	MMC10.2 104K50A31 TR16
0.027	J31	5.0	2.5	30	MMC5.7 273K50J31 TR12	0.12	A31	9.1	5.5	30	MMC10.2 124K50A31 TR16
0.033	J31	5.0	2.5	30	MMC5.7 333K50J31 TR12	0.15	A31	9.1	5.5	30	MMC10.2 154K50A31 TR16
0.039	J31	5.0	2.5	30	MMC5.7 393K50J31 TR12	0.18	A31	9.1	5.5	20	MMC10.2 184K50A31 TR16
0.047	J31	5.0	2.5	30	MMC5.7 473K50J31 TR12	0.22	A31	9.1	5.5	20	MMC10.2 224K50A31 TR16
0.056	J31	5.0	2.5	30	MMC5.7 563K50J31 TR12	0.27	A31	9.1	5.5	20	MMC10.2 274K50A31 TR16
0.068	J31	5.0	2.5	20	MMC5.7 683K50J31 TR12	0.33	A31	9.1	5.5	20	MMC10.2 334K50A31 TR16
0.082	J31	5.0	2.5	20	MMC5.7 823K50J31 TR12	0.39	A31	9.1	5.5	20	MMC10.2 394K50A31 TR16
0.10	J31	5.0	2.5	20	MMC5.7 104K50J31 TR12	0.47	A31	9.1	5.5	20	MMC10.2 474K50A31 TR16
0.12	J33	5.0	3.0	20	MMC5.7 124K50J33 TR12	0.56	A31	9.1	5.5	12	MMC10.2 564K50A31 TR16
0.15	J33	5.0	3.0	20	MMC5.7 154K50J33 TR12	0.68	A31	9.1	5.5	12	MMC10.2 684K50A31 TR16
0.18	J35	5.0	4.0	20	MMC5.7 184K50J35 TR12	0.82	A31	9.1	5.5	12	MMC10.2 824K50A31 TR16
0.22	J35	5.0	4.0	20	MMC5.7 224K50J35 TR12	1.0	A31	9.1	5.5	12	MMC10.2 105K50A31 TR16
<b>CHIP LENGTH 7.3 MM CODE 2824</b>						1.2	A31	9.1	5.5	12	MMC10.2 125K50A31 TR16
0.0010	K31	6.0	2.5	50	MMC7.3 102K50K31 TR12	1.5	A31	9.1	5.5	12	MMC10.2 155K50A31 TR16
0.0012	K31	6.0	2.5	50	MMC7.3 122K50K31 TR12	1.8	A31	9.1	5.5	12	MMC10.2 185K50A31 TR16
0.0015	K31	6.0	2.5	50	MMC7.3 152K50K31 TR12	2.2	A31	9.1	5.5	12	MMC10.2 225K50A31 TR16
0.0018	K31	6.0	2.5	50	MMC7.3 182K50K31 TR12	<b>CHIP LENGTH 12.7 MM CODE 5045</b>					
0.0022	K31	6.0	2.5	50	MMC7.3 222K50K31 TR12	2.7	B31	11.5	6.5	8	MMC12.7 275K50B31 TR24
0.0027	K31	6.0	2.5	50	MMC7.3 272K50K31 TR12	3.3	B31	11.5	6.5	8	MMC12.7 335K50B31 TR24
0.0033	K31	6.0	2.5	50	MMC7.3 332K50K31 TR12	3.9	B31	11.5	6.5	8	MMC12.7 395K50B31 TR24
0.0039	K31	6.0	2.5	50	MMC7.3 392K50K31 TR12	4.7	B31	11.5	6.5	8	MMC12.7 475K50B31 TR24
0.0047	K31	6.0	2.5	50	MMC7.3 472K50K31 TR12	<b>CHIP LENGTH 16.5 MM CODE 6560</b>					
0.0056	K31	6.0	2.5	50	MMC7.3 562K50K31 TR12	5.6	C31	15.0	7.0	5	MMC16.5 565K50C31 TR24
0.0068	K31	6.0	2.5	40	MMC7.3 682K50K31 TR12	6.8	C31	15.0	7.0	5	MMC16.5 685K50C31 TR24
0.0082	K31	6.0	2.5	40	MMC7.3 822K50K31 TR12	8.2	C31	15.0	7.0	5	MMC16.5 825K50C31 TR24
0.010	K31	6.0	2.5	40	MMC7.3 103K50K31 TR12	10.0	C31	15.0	7.0	5	MMC16.5 106K50C31 TR24
0.012	K31	6.0	2.5	40	MMC7.3 123K50K31 TR12	12.0	C31	15.0	7.0	5	MMC16.5 126K50C31 TR24
0.015	K31	6.0	2.5	40	MMC7.3 153K50K31 TR12	15.0	C31	15.0	7.0	5	MMC16.5 156K50C31 TR24
0.018	K31	6.0	2.5	40	MMC7.3 183K50K31 TR12	<b>63 VDC/40 VAC</b>					
0.022	K31	6.0	2.5	30	MMC7.3 223K50K31 TR12	<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.027	K31	6.0	2.5	30	MMC7.3 273K50K31 TR12	0.0010	K31	6.0	2.5	50	MMC7.3 102K63K31 TR12
0.033	K31	6.0	2.5	30	MMC7.3 333K50K31 TR12	0.0012	K31	6.0	2.5	50	MMC7.3 122K63K31 TR12
0.039	K31	6.0	2.5	30	MMC7.3 393K50K31 TR12	0.0015	K31	6.0	2.5	50	MMC7.3 152K63K31 TR12
0.047	K31	6.0	2.5	30	MMC7.3 473K50K31 TR12	0.0018	K31	6.0	2.5	50	MMC7.3 182K63K31 TR12
0.056	K31	6.0	2.5	30	MMC7.3 563K50K31 TR12	0.0022	K31	6.0	2.5	50	MMC7.3 222K63K31 TR12
0.068	K31	6.0	2.5	30	MMC7.3 683K50K31 TR12	0.0027	K31	6.0	2.5	50	MMC7.3 272K63K31 TR12
0.082	K31	6.0	2.5	30	MMC7.3 823K50K31 TR12						
0.10	K31	6.0	2.5	30	MMC7.3 104K50K31 TR12						
0.12	K31	6.0	2.5	30	MMC7.3 124K50K31 TR12						
0.15	K31	6.0	2.5	25	MMC7.3 154K50K31 TR12						
0.18	K33	6.0	3.0	25	MMC7.3 184K50K33 TR12						
0.22	K33	6.0	3.0	25	MMC7.3 224K50K33 TR12						
0.27	K35	6.0	3.5	25	MMC7.3 274K50K35 TR12						

ARTICLE TABLE

Capacitance µF	Size code	Dimensions in mm ±0.2		Max dU/dt V/µs	Article code
		B	H		
<b>63 VDC/40 VAC</b>					
<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.0033	K31	6.0	2.5	50	MMC7.3 332K63K31 TR12
0.0039	K31	6.0	2.5	50	MMC7.3 392K63K31 TR12
0.0047	K31	6.0	2.5	50	MMC7.3 472K63K31 TR12
0.0056	K31	6.0	2.5	50	MMC7.3 562K63K31 TR12
0.0068	K31	6.0	2.5	40	MMC7.3 682K63K31 TR12
0.0082	K31	6.0	2.5	40	MMC7.3 822K63K31 TR12
0.010	K31	6.0	2.5	40	MMC7.3 103K63K31 TR12
0.012	K31	6.0	2.5	40	MMC7.3 123K63K31 TR12
0.015	K31	6.0	2.5	40	MMC7.3 153K63K31 TR12
0.018	K31	6.0	2.5	40	MMC7.3 183K63K31 TR12
0.022	K31	6.0	2.5	30	MMC7.3 223K63K31 TR12
0.027	K31	6.0	2.5	30	MMC7.3 273K63K31 TR12
0.033	K31	6.0	2.5	30	MMC7.3 333K63K31 TR12
0.039	K31	6.0	2.5	30	MMC7.3 393K63K31 TR12
0.047	K31	6.0	2.5	30	MMC7.3 473K63K31 TR12
0.056	K31	6.0	2.5	30	MMC7.3 563K63K31 TR12
0.068	K31	6.0	2.5	30	MMC7.3 683K63K31 TR12
0.082	K31	6.0	2.5	30	MMC7.3 823K63K31 TR12
0.10	K31	6.0	2.5	30	MMC7.3 104K63K31 TR12
0.12	K31	6.0	2.5	30	MMC7.3 124K63K31 TR12
0.15	K31	6.0	2.5	30	MMC7.3 154K63K31 TR12
0.18	K33	6.0	3.0	25	MMC7.3 184K63K33 TR12
0.22	K33	6.0	3.0	25	MMC7.3 224K63K33 TR12
0.27	K35	6.0	3.5	25	MMC7.3 274K63K35 TR12
0.33	K35	6.0	3.5	25	MMC7.3 334K63K35 TR12
0.39	K35	6.0	3.5	25	MMC7.3 394K63K35 TR12
0.47	K35	6.0	3.5	25	MMC7.3 474K63K35 TR12
<b>CHIP LENGTH 10.2 MM CODE 4036</b>					
0.022	A31	9.1	5.5	40	MMC10.2 223K63A31 TR16
0.027	A31	9.1	5.5	40	MMC10.2 273K63A31 TR16
0.033	A31	9.1	5.5	40	MMC10.2 333K63A31 TR16
0.039	A31	9.1	5.5	40	MMC10.2 393K63A31 TR16
0.047	A31	9.1	5.5	40	MMC10.2 473K63A31 TR16
0.056	A31	9.1	5.5	40	MMC10.2 563K63A31 TR16
0.068	A31	9.1	5.5	40	MMC10.2 683K63A31 TR16
0.082	A31	9.1	5.5	40	MMC10.2 823K63A31 TR16
0.10	A31	9.1	5.5	30	MMC10.2 104K63A31 TR16
0.12	A31	9.1	5.5	30	MMC10.2 124K63A31 TR16
0.15	A31	9.1	5.5	30	MMC10.2 154K63A31 TR16
0.18	A31	9.1	5.5	20	MMC10.2 184K63A31 TR16
0.22	A31	9.1	5.5	20	MMC10.2 224K63A31 TR16
0.27	A31	9.1	5.5	20	MMC10.2 274K63A31 TR16
0.33	A31	9.1	5.5	20	MMC10.2 334K63A31 TR16
0.39	A31	9.1	5.5	20	MMC10.2 394K63A31 TR16
0.47	A31	9.1	5.5	20	MMC10.2 474K63A31 TR16
0.56	A31	9.1	5.5	12	MMC10.2 564K63A31 TR16
0.68	A31	9.1	5.5	12	MMC10.2 684K63A31 TR16
0.82	A31	9.1	5.5	12	MMC10.2 824K63A31 TR16
1.0	A31	9.1	5.5	12	MMC10.2 105K63A31 TR16
1.2	A31	9.1	5.5	12	MMC10.2 125K63A31 TR16
1.5	A31	9.1	5.5	12	MMC10.2 155K63A31 TR16
<b>CHIP LENGTH 12.7 MM CODE 5045</b>					
1.8	B31	11.5	6.5	8	MMC12.7 185K63B31 TR24
2.2	B31	11.5	6.5	8	MMC12.7 225K63B31 TR24
2.7	B31	11.5	6.5	8	MMC12.7 275K63B31 TR24
3.3	B31	11.5	6.5	8	MMC12.7 335K63B31 TR24

Capacitance µF	Size code	Dimensions in mm ±0.2		Max dU/dt V/µs	Article code
		B	H		
<b>63 VDC/40 VAC</b>					
<b>CHIP LENGTH 16.5 MM CODE 6560</b>					
3.9	C31	15.0	7.0	5	MMC16.5 395K63C31 TR24
4.7	C31	15.0	7.0	5	MMC16.5 475K63C31 TR24
<b>100 VDC/63 VAC</b>					
<b>CHIP LENGTH 5.7 MM CODE 2220</b>					
0.0010	J31	5.0	2.5	40	MMC5.7 102K100J31 TR12
0.0012	J31	5.0	2.5	40	MMC5.7 122K100J31 TR12
0.0015	J31	5.0	2.5	40	MMC5.7 152K100J31 TR12
0.0018	J31	5.0	2.5	40	MMC5.7 182K100J31 TR12
0.0022	J31	5.0	2.5	40	MMC5.7 222K100J31 TR12
0.0027	J31	5.0	2.5	40	MMC5.7 272K100J31 TR12
0.0033	J31	5.0	2.5	40	MMC5.7 332K100J31 TR12
0.0039	J31	5.0	2.5	40	MMC5.7 392K100J31 TR12
0.0047	J31	5.0	2.5	40	MMC5.7 472K100J31 TR12
0.0056	J31	5.0	2.5	40	MMC5.7 562K100J31 TR12
0.0068	J31	5.0	2.5	40	MMC5.7 682K100J31 TR12
0.0082	J31	5.0	2.5	40	MMC5.7 822K100J31 TR12
0.010	J31	5.0	2.5	40	MMC5.7 103K100J31 TR12
0.012	J31	5.0	2.5	40	MMC5.7 123K100J31 TR12
0.015	J31	5.0	2.5	30	MMC5.7 153K100J31 TR12
0.018	J31	5.0	2.5	30	MMC5.7 183K100J31 TR12
0.022	J31	5.0	2.5	30	MMC5.7 223K100J31 TR12
0.027	J31	5.0	2.5	30	MMC5.7 273K100J31 TR12
0.033	J31	5.0	2.5	30	MMC5.7 333K100J31 TR12
0.039	J31	5.0	2.5	30	MMC5.7 393K100J31 TR12
0.047	J31	5.0	2.5	30	MMC5.7 473K100J31 TR12
0.056	J33	5.0	3.0	30	MMC5.7 563K100J33 TR12
0.068	J33	5.0	3.0	30	MMC5.7 683K100J33 TR12
0.082	J35	5.0	4.0	30	MMC5.7 823K100J35 TR12
0.10	J35	5.0	4.0	30	MMC5.7 104K100J35 TR12
<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.0010	K31	6.0	2.5	50	MMC7.3 102K100K31 TR12
0.0012	K31	6.0	2.5	50	MMC7.3 122K100K31 TR12
0.0015	K31	6.0	2.5	50	MMC7.3 152K100K31 TR12
0.0018	K31	6.0	2.5	50	MMC7.3 182K100K31 TR12
0.0022	K31	6.0	2.5	50	MMC7.3 222K100K31 TR12
0.0027	K31	6.0	2.5	50	MMC7.3 272K100K31 TR12
0.0033	K31	6.0	2.5	50	MMC7.3 332K100K31 TR12
0.0039	K31	6.0	2.5	50	MMC7.3 392K100K31 TR12
0.0047	K31	6.0	2.5	50	MMC7.3 472K100K31 TR12
0.0056	K31	6.0	2.5	50	MMC7.3 562K100K31 TR12
0.0068	K31	6.0	2.5	40	MMC7.3 682K100K31 TR12
0.0082	K31	6.0	2.5	40	MMC7.3 822K100K31 TR12
0.010	K31	6.0	2.5	40	MMC7.3 103K100K31 TR12
0.012	K31	6.0	2.5	40	MMC7.3 123K100K31 TR12
0.015	K31	6.0	2.5	40	MMC7.3 153K100K31 TR12
0.018	K31	6.0	2.5	40	MMC7.3 183K100K31 TR12
0.022	K31	6.0	2.5	30	MMC7.3 223K100K31 TR12
0.027	K31	6.0	2.5	30	MMC7.3 273K100K31 TR12
0.033	K31	6.0	2.5	30	MMC7.3 333K100K31 TR12
0.039	K31	6.0	2.5	30	MMC7.3 393K100K31 TR12
0.047	K31	6.0	2.5	30	MMC7.3 473K100K31 TR12
0.056	K31	6.0	2.5	30	MMC7.3 563K100K31 TR12
0.068	K31	6.0	2.5	30	MMC7.3 683K100K31 TR12
0.082	K31	6.0	2.5	30	MMC7.3 823K100K31 TR12
0.10	K31	6.0	2.5	30	MMC7.3 104K100K31 TR12
0.12	K33	6.0	3.0	30	MMC7.3 124K100K33 TR12
0.15	K35	6.0	3.5	30	MMC7.3 154K100K35 TR12

## ARTICLE TABLE

Capacitance $\mu\text{F}$	Size code	Dimensions in mm $\pm 0.2$		Max dU/dt V/ $\mu\text{s}$	Article code	Capacitance $\mu\text{F}$	Size code	Dimensions in mm $\pm 0.2$		Max dU/dt V/ $\mu\text{s}$	Article code
		B	H					B	H		
<b>100 VDC/63 VAC</b>						<b>250 VDC/160 VAC</b>					
<b>CHIP LENGTH 7.3 MM CODE 2824</b>						<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.18	K35	6.0	3.5	30	MMC7.3 184K100K35 TR12	0.0010	K31	6.0	2.5	50	MMC7.3 102K250K31 TR12
0.22	K35	6.0	4.5	30	MMC7.3 224K100K37 TR12	0.0012	K31	6.0	2.5	50	MMC7.3 122K250K31 TR12
<b>CHIP LENGTH 10.2 MM CODE 4036</b>						<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.022	A31	9.1	5.5	40	MMC10.2 223K100A31 TR16	0.0015	K31	6.0	2.5	50	MMC7.3 152K250K31 TR12
0.027	A31	9.1	5.5	40	MMC10.2 273K100A31 TR16	0.0018	K31	6.0	2.5	50	MMC7.3 182K250K31 TR12
0.033	A31	9.1	5.5	40	MMC10.2 333K100A31 TR16	0.0022	K31	6.0	2.5	50	MMC7.3 222K250K31 TR12
0.039	A31	9.1	5.5	40	MMC10.2 393K100A31 TR16	0.0027	K31	6.0	2.5	50	MMC7.3 272K250K31 TR12
0.047	A31	9.1	5.5	40	MMC10.2 473K100A31 TR16	0.0033	K31	6.0	2.5	50	MMC7.3 332K250K31 TR12
0.056	A31	9.1	5.5	40	MMC10.2 563K100A31 TR16	0.0039	K31	6.0	2.5	50	MMC7.3 392K250K31 TR12
0.068	A31	9.1	5.5	40	MMC10.2 683K100A31 TR16	0.0047	K31	6.0	2.5	50	MMC7.3 472K250K31 TR12
0.082	A31	9.1	5.5	40	MMC10.2 823K100A31 TR16	0.0056	K31	6.0	2.5	50	MMC7.3 562K250K31 TR12
0.10	A31	9.1	5.5	30	MMC10.2 104K100A31 TR16	0.0068	K31	6.0	2.5	40	MMC7.3 682K250K31 TR12
0.12	A31	9.1	5.5	30	MMC10.2 124K100A31 TR16	0.0082	K31	6.0	2.5	40	MMC7.3 822K250K31 TR12
0.15	A31	9.1	5.5	30	MMC10.2 154K100A31 TR16	0.010	K31	6.0	2.5	40	MMC7.3 103K250K31 TR12
0.18	A31	9.1	5.5	20	MMC10.2 184K100A31 TR16	0.012	K31	6.0	2.5	40	MMC7.3 123K250K31 TR12
0.22	A31	9.1	5.5	20	MMC10.2 224K100A31 TR16	0.015	K31	6.0	2.5	40	MMC7.3 153K250K31 TR12
0.27	A31	9.1	5.5	20	MMC10.2 274K100A31 TR16	0.018	K33	6.0	3.0	40	MMC7.3 183K250K33 TR12
0.33	A31	9.1	5.5	20	MMC10.2 334K100A31 TR16	0.022	K33	6.0	3.0	40	MMC7.3 223K250K33 TR12
0.39	A31	9.1	5.5	20	MMC10.2 394K100A31 TR16	0.027	K35	6.0	3.5	40	MMC7.3 273K250K35 TR12
0.47	A31	9.1	5.5	20	MMC10.2 474K100A31 TR16	0.033	K35	6.0	3.5	40	MMC7.3 333K250K35 TR12
<b>CHIP LENGTH 12.7 MM CODE 5045</b>						<b>CHIP LENGTH 10.2 MM CODE 4036</b>					
0.56	B31	11.5	6.5	12	MMC12.7 564K100B31 TR24	0.022	A31	9.1	5.5	40	MMC10.2 223K250A31 TR16
0.68	B31	11.5	6.5	12	MMC12.7 684K100B31 TR24	0.027	A31	9.1	5.5	40	MMC10.2 273K250A31 TR16
0.82	B31	11.5	6.5	12	MMC12.7 824K100B31 TR24	0.033	A31	9.1	5.5	40	MMC10.2 333K250A31 TR16
1.0	B31	11.5	6.5	12	MMC12.7 105K100B31 TR24	0.039	A31	9.1	5.5	40	MMC10.2 393K250A31 TR16
<b>CHIP LENGTH 16.5 MM CODE 6560</b>						<b>CHIP LENGTH 10.2 MM CODE 4036</b>					
1.2	C31	15.0	7.0	8	MMC16.5 125K100C31 TR24	0.047	A31	9.1	5.5	40	MMC10.2 473K250A31 TR16
1.5	C31	15.0	7.0	8	MMC16.5 155K100C31 TR24	0.056	A31	9.1	5.5	40	MMC10.2 563K250A31 TR16
1.8	C31	15.0	7.0	8	MMC16.5 185K100C31 TR24	0.068	A31	9.1	5.5	40	MMC10.2 683K250A31 TR16
2.2	C31	15.0	7.0	8	MMC16.5 225K100C31 TR24	0.082	A31	9.1	5.5	40	MMC10.2 823K250A31 TR16
2.7	C31	15.0	7.0	8	MMC16.5 275K100C31 TR24	0.10	A31	9.1	5.5	30	MMC10.2 104K250A31 TR16
3.3	C31	15.0	7.0	8	MMC16.5 335K100C31 TR24	0.12	A31	9.1	5.5	30	MMC10.2 124K250A31 TR16
<b>250 VDC/160 VAC</b>						<b>CHIP LENGTH 12.7 MM CODE 5045</b>					
<b>CHIP LENGTH 5.7 MM CODE 2220</b>						0.18	B31	11.5	6.5	20	MMC12.7 184K250B31 TR24
0.0010	J31	5.0	2.5	40	MMC5.7 102K250J31 TR12	0.22	B31	11.5	6.5	20	MMC12.7 224K250B31 TR24
0.0012	J31	5.0	2.5	40	MMC5.7 122K250J31 TR12	0.27	B31	11.5	6.5	20	MMC12.7 274K250B31 TR24
0.0015	J31	5.0	2.5	40	MMC5.7 152K250J31 TR12	0.33	B31	11.5	6.5	20	MMC12.7 334K250B31 TR24
0.0018	J31	5.0	2.5	40	MMC5.7 182K250J31 TR12	0.39	B31	11.5	6.5	20	MMC12.7 394K250B31 TR24
0.0022	J31	5.0	2.5	40	MMC5.7 222K250J31 TR12	0.47	B31	11.5	6.5	20	MMC12.7 474K250B31 TR24
0.0027	J31	5.0	2.5	40	MMC5.7 272K250J31 TR12	<b>CHIP LENGTH 16.5 MM CODE 6560</b>					
0.0033	J31	5.0	2.5	40	MMC5.7 332K250J31 TR12	0.56	C31	15.0	7.0	12	MMC16.5 564K250C31 TR24
0.0039	J31	5.0	2.5	40	MMC5.7 392K250J31 TR12	0.68	C31	15.0	7.0	12	MMC16.5 684K250C31 TR24
0.0047	J31	5.0	2.5	40	MMC5.7 472K250J31 TR12	0.82	C31	15.0	7.0	12	MMC16.5 824K250C31 TR24
0.0056	J31	5.0	2.5	40	MMC5.7 562K250J31 TR12	1.0	C31	15.0	7.0	12	MMC16.5 105K250C31 TR24
0.0068	J31	5.0	2.5	40	MMC5.7 682K250J31 TR12	<b>400 VDC/200 VAC</b>					
0.0082	J31	5.0	2.5	40	MMC5.7 822K250J31 TR12	<b>CHIP LENGTH 7.3 MM CODE 2824</b>					
0.010	J31	5.0	2.5	40	MMC5.7 103K250J31 TR12	0.0010	K31	6.0	2.5	50	MMC7.3 102K400K31 TR12
0.012	J31	5.0	2.5	40	MMC5.7 123K250J31 TR12	0.0012	K31	6.0	2.5	50	MMC7.3 122K400K31 TR12
0.015	J33	5.0	3.0	40	MMC5.7 153K250J33 TR12	0.0015	K31	6.0	2.5	50	MMC7.3 152K400K31 TR12
0.018	J35	5.0	4.0	40	MMC5.7 183K250J35 TR12	0.0018	K31	6.0	2.5	50	MMC7.3 182K400K31 TR12
0.022	J35	5.0	4.0	40	MMC5.7 223K250J35 TR12						

**NOTE:** These products are not yet suitable for lead free soldering. For actual status, please contact manufacturer.

## ARTICLE TABLE

Capacitance $\mu\text{F}$	Size code	Dimensions in mm $\pm 0.2$		Max $dU/dt$ $\text{V}/\mu\text{s}$	Article code	Capacitance $\mu\text{F}$	Size code	Dimensions in mm $\pm 0.2$		Max $dU/dt$ $\text{V}/\mu\text{s}$	Article code
		B	H					B	H		
<b>400 VDC/200 VAC</b>						<b>400 VDC/200 VAC</b>					
<b>CHIP LENGTH 7.3 MM CODE 2824</b>						<b>CHIP LENGTH 12.7 MM CODE 5045</b>					
0.0022	K31	6.0	2.5	50	MMC7.3 222K400K31 TR12	0.082	B31	11.5	6.5	30	MMC12.7 823K400B31 TR24
0.0027	K31	6.0	2.5	50	MMC7.3 272K400K31 TR12	0.10	B31	11.5	6.5	30	MMC12.7 104K400B31 TR24
0.0033	K31	6.0	2.5	50	MMC7.3 332K400K31 TR12	0.12	B31	11.5	6.5	30	MMC12.7 124K400B31 TR24
0.0039	K31	6.0	2.5	50	MMC7.3 392K400K31 TR12	0.15	B31	11.5	6.5	30	MMC12.7 154K400B31 TR24
0.0047	K31	6.0	2.5	50	MMC7.3 472K400K31 TR12	<b>CHIP LENGTH 16.5 MM CODE 6560</b>					
0.0056	K33	6.0	3.0	50	MMC7.3 562K400K33 TR12	0.18	C31	15.0	7.0	20	MMC16.5 184K400C31 TR24
0.0068	K33	6.0	3.0	50	MMC7.3 682K400K33 TR12	0.22	C31	15.0	7.0	20	MMC16.5 224K400C31 TR24
0.0082	K33	6.0	3.0	50	MMC7.3 822K400K33 TR12	0.27	C31	15.0	7.0	20	MMC16.5 274K400C31 TR24
0.010	K35	6.0	3.5	50	MMC7.3 103K400K35 TR12	0.33	C31	15.0	7.0	20	MMC16.5 334K400C31 TR24
0.012	K35	6.0	3.5	50	MMC7.3 123K400K35 TR12	0.39	C31	15.0	7.0	20	MMC16.5 394K400C31 TR24
0.015	K37	6.0	4.5	50	MMC7.3 153K400K37 TR12	0.47	C31	15.0	7.0	20	MMC16.5 474K400C31 TR24
<b>CHIP LENGTH 10.2 MM CODE 4036</b>											
0.022	A31	9.1	5.5	40	MMC10.2 223K400A31 TR16						
0.027	A31	9.1	5.5	40	MMC10.2 273K400A31 TR16						
0.033	A31	9.1	5.5	40	MMC10.2 333K400A31 TR16						
0.039	A31	9.1	5.5	40	MMC10.2 393K400A31 TR16						
0.047	A31	9.1	5.5	40	MMC10.2 473K400A31 TR16						
0.056	A31	9.1	5.5	40	MMC10.2 563K400A31 TR16						
0.068	A31	9.1	5.5	40	MMC10.2 683K400A31 TR16						