

KP-3C

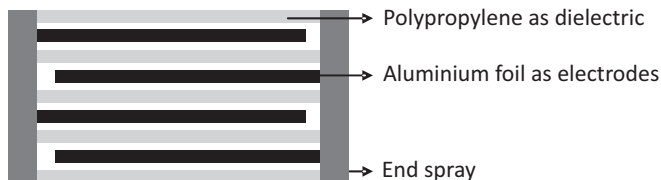


Highlights

- High DV/DT
- Low ESR
- Low loss polypropylene dielectric
- Impregnated elements eliminate corona
- Flame retardant UL94 - V0, ROHS compliant

Construction

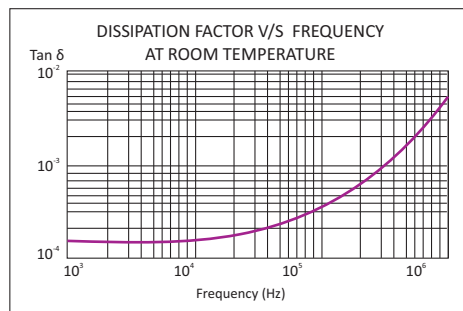
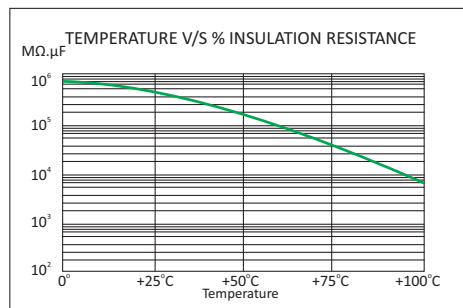
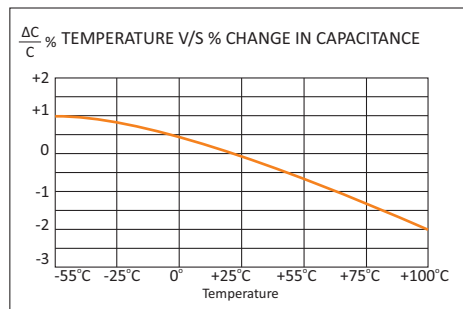
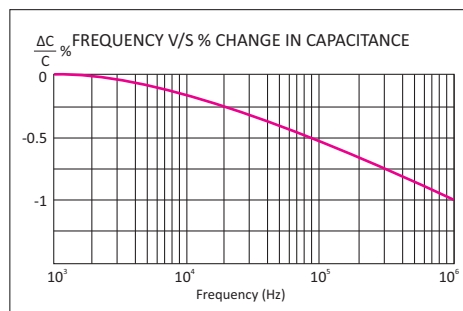
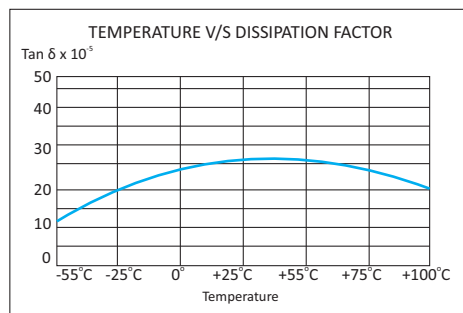
Extended foil electrodes and polypropylene film dielectric impregnated



Applications

These capacitors are used in high voltage, high current and high pulse applications such as:

- IGBT protection circuits
- Snubber networks
- Low frequency tuning circuits



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Technical Specifications

Physical Characteristics

▪ Dielectric material	Polypropylene film.
▪ Electrode material	Aluminium foil
▪ Winding construction	Extended foil electrodes and polypropylene film dielectric impregnated
▪ Enclosure	Preformed UL 94 V-0 plastic case with thermosetting resin-fill

Electrical Characteristics

▪ Capacitance range	0.1 MFD to 3.0 MFD				
▪ Capacity tolerance	±5%(J), ±10%(K)				
▪ Rated voltage VDC	1000, 1250, 1500, 2000				
▪ Rated voltage VAC	480, 550, 630, 750				
▪ Test voltage between terminals	2.5x rated voltage VDC for 10 seconds				
▪ Test voltage terminal to case	3KVAC at 50Hz for 60 seconds				
▪ Dissipation factor (Tan d)	≤0.0005 at 1 KHz and 25°C				
▪ Temperature range	-40°C to +85°C				
▪ Insulation resistance at 25°C & at a test voltage of 500 VDC applied for 1 minute	<table> <tr> <td>C ≤ 0.33 MFD</td><td>≥100,000MΩ</td></tr> <tr> <td>C > 0.33 MFD</td><td>≥30,000MΩ</td></tr> </table>	C ≤ 0.33 MFD	≥100,000MΩ	C > 0.33 MFD	≥30,000MΩ
C ≤ 0.33 MFD	≥100,000MΩ				
C > 0.33 MFD	≥30,000MΩ				

Marking on Capacitors

Each capacitor will have the following information printed on it, sequentially:

- The Company's symbol  followed by the words ALCON
- The capacitor grade viz KP-3C
- The capacitance value MFD
- The rated voltage VDC
- Capacity tolerance and manufacturing code
- Part number on non-standard capacitors

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Standard Capacitor Values

Working Voltage 1000 VDC (480 VAC)

Rated Capacitance MFD	Case Code	DV/DT V/ μ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at 100KHz m Ω	Ordering Code*
0.100	K2	900	90.00	5.60	11.20	SI0U101000K2K__KP3C
0.150	K2	900	135.00	5.70	10.80	SI0U151000K2K__KP3C
0.220	K3	900	198.00	6.80	10.40	SI0U221000K3K__KP3C
0.220	B1,C1	900	198.00	18.20	4.20	SI0U221000__K__KP3C
0.270	B1,C1	900	243.00	18.70	4.00	SI0U271000__K__KP3C
0.330	B1,C1	900	297.00	19.70	3.70	SI0U331000__K__KP3C
0.390	B1	900	351.00	20.60	3.70	SI0U391000B1K__KP3C
0.390	C1	900	351.00	20.60	3.50	SI0U391000C1K__KP3C
0.470	B5	900	423.00	21.10	3.50	SI0U471000B5K__KP3C
0.560	B5	800	392.00	21.30	3.50	SI0U561000B5K__KP3C
0.680	B5	800	476.00	21.30	3.20	SI0U681000B5K__KP3C
0.750	B5,B2	800	525.00	25.60	3.00	SI0U751000__K__KP3C
0.820	B5	800	574.00	26.00	3.00	SI0U821000B5K__KP3C
1.000	B5	900	900.00	26.00	3.00	SI1U001000B5K__KP3C
1.000	B3	800	900.00	26.00	3.00	SI1U001000B3K__KP3C
1.200	B3	800	960.00	26.00	2.50	SI1U201000B3K__KP3C
1.500	B3	800	1200.00	26.00	2.50	SI1U501000B3K__KP3C
1.750	B4	500	875.00	28.00	2.50	SI1U751000B4K__KP3C
2.000	B4	500	1000.00	28.20	2.50	SI2U001000B4K__KP3C
2.200	C2	400	880.00	28.50	2.40	SI2U201000C2K__KP3C
2.500	C2	400	1000.00	29.00	2.20	SI2U501000C2K__KP3C
3.000	C2	400	1200.00	30.00	2.00	SI3U001000C2K__KP3C

Working Voltage 1250 VDC (550 VAC)

Rated Capacitance MFD	Case Code	DV/DT V/ μ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at 100KHz m Ω	Ordering Code*
0.100	K2	1000	100.00	5.60	11.20	SI0U101250K2K__KP3C
0.150	K2	1000	150.00	5.70	10.80	SI0U151250K2K__KP3C
0.220	K3	1000	220.00	6.80	10.40	SI0U221250K3K__KP3C
0.220	B1,C1	1000	220.00	18.20	4.20	SI0U221250__K__KP3C
0.270	B1,C1	1000	270.00	18.70	4.00	SI0U271250__K__KP3C
0.330	B1,C1	1000	330.00	19.70	3.70	SI0U331250__K__KP3C
0.390	B1,C1	1000	390.00	20.60	3.70	SI0U391250__K__KP3C
0.470	B5	1000	470.00	21.10	3.50	SI0U471250B5K__KP3C
0.560	B5	1000	560.00	21.30	3.50	SI0U561250B5K__KP3C
0.680	B5	900	612.00	21.30	3.20	SI0U681250B5K__KP3C
0.750	B5,B2	900	675.00	25.60	3.00	SI0U751250__K__KP3C
0.820	B5	900	738.00	26.00	3.00	SI0U821250B5K__KP3C
1.000	B5	900	900.00	26.00	3.00	SI1U001250B5K__KP3C
1.000	B3	1000	1000.00	26.00	3.00	SI1U001250B3K__KP3C

Custom-designed capacitors are available on request
Refer to "Capacitor Drawing" on page 5 to 8

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Standard Capacitor Values

Working Voltage 1250 VDC (550 VAC)

Rated Capacitance MFD	Case Code	DV/DT V/μ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at 100KHz mΩ	Ordering Code*
1.200	B3	900	1080.00	26.00	2.50	SI1U201250B3K__KP3C
1.500	B3	900	1350.00	26.00	2.50	SI1U501250B3K__KP3C
1.750	B4	600	1050.00	28.00	2.50	SI1U751250B4K__KP3C
2.000	B4	600	1100.00	28.20	2.50	SI2U001250B4K__KP3C
2.200	C2	500	880.00	28.50	2.40	SI2U201250C2K__KP3C
2.500	C2	500	1250.00	29.00	2.20	SI2U501250C2K__KP3C
3.000	C2	500	1500.00	30.00	2.00	SI3U001250C2K__KP3C

Working Voltage 1500 VDC (630 VAC)

Rated Capacitance MFD	Case Code	DV/DT V/μ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at 100KHz mΩ	Ordering Code*
0.100	K2	1100	110.00	5.60	11.20	SI0U101500K2K__KP3C
0.150	K2	1100	165.00	5.70	10.80	SI0U151500K2K__KP3C
0.220	K4	1100	242.00	6.80	10.40	SI0U221500K4K__KP3C
0.220	B1,C1	1100	242.00	18.20	4.20	SI0U221500__K__KP3C
0.270	B1,C1	1100	297.00	18.70	4.00	SI0U271500__K__KP3C
0.330	B1,C1	1100	363.00	19.70	3.70	SI0U331500__K__KP3C
0.390	B1	1100	429.00	20.60	3.70	SI0U391500B1K__KP3C
0.390	C1	1100	429.00	20.60	3.50	SI0U391500C1K__KP3C
0.470	B5	1100	517.00	21.10	3.50	SI0U471500B5K__KP3C
0.560	B5	1000	560.00	21.30	3.50	SI0U561500B5K__KP3C
0.680	B5	1000	680.00	21.30	3.20	SI0U681500B5K__KP3C
0.750	B5,B2	1000	750.00	25.60	3.00	SI0U751500__K__KP3C
0.820	B5	1000	820.00	26.00	3.00	SI0U821500B5K__KP3C
1.000	B3	1000	1000.00	26.00	3.00	SI1U001500B3K__KP3C
1.200	B3	1000	1200.00	26.00	2.50	SI1U201500B3K__KP3C
1.500	B3	1000	1500.00	26.00	2.50	SI1U501500B3K__KP3C
1.750	B4	700	1225.00	28.00	2.50	SI1U751500B4K__KP3C
2.000	B4	700	1400.00	28.20	2.50	SI2U001500B4K__KP3C
2.200	C2	600	1320.00	28.50	2.40	SI2U201500C2K__KP3C
2.500	C2	600	1500.00	29.00	2.20	SI2U501500C2K__KP3C
3.000	C2	600	1800.00	30.00	2.00	SI3U001500C2K__KP3C

Working Voltage 2000 VDC (750 VAC)

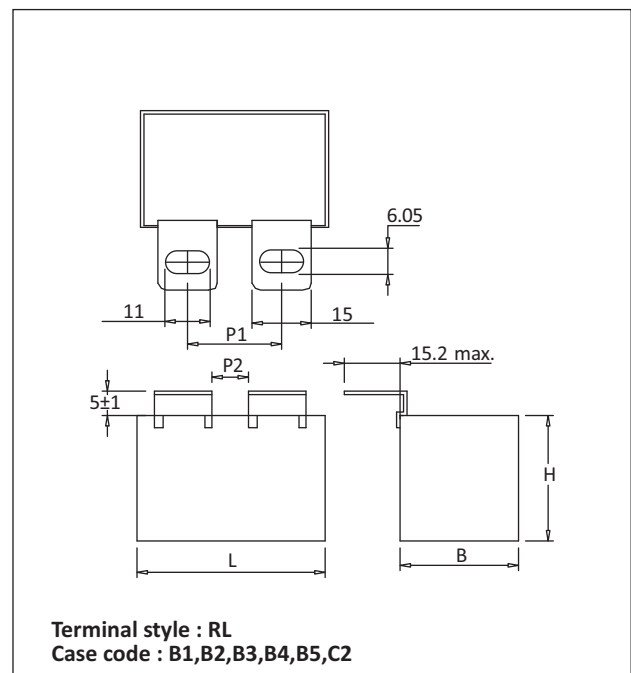
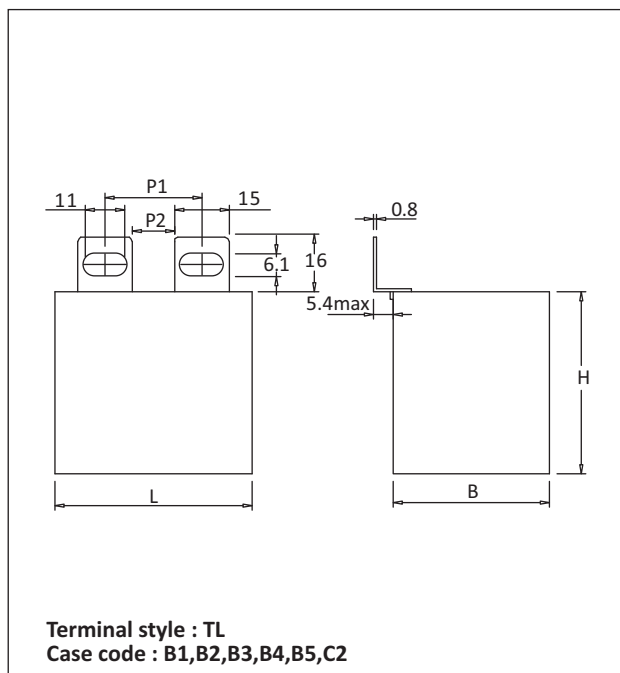
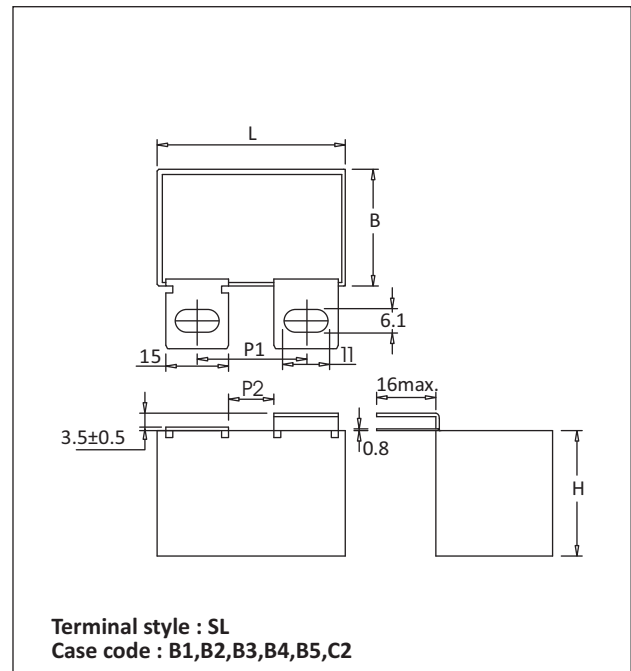
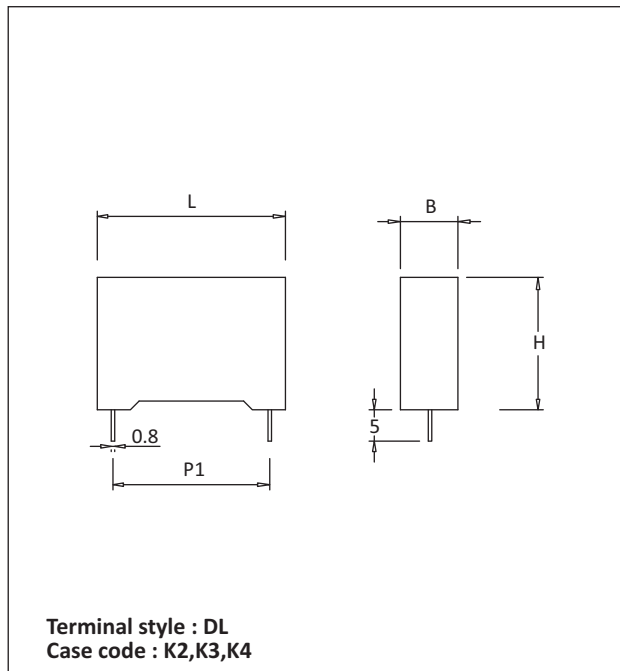
Rated Capacitance MFD	Case Code	DV/DT V/μ Sec	I Peak Amps	Irms Max at 100KHz & 55°C Amps	ESR Max at 100KHz mΩ	Ordering Code*
0.100	B1	1300	130.00	13.20	8.40	SI0U102000B1K__KP3C
0.150	B5	1200	180.00	15.11	7.00	SI0U152000B5K__KP3C
0.220	B5	1200	264.00	19.80	4.50	SI0U222000B5K__KP3C
0.270	B5	1200	324.00	21.70	4.30	SI0U272000B5K__KP3C
0.330	B3	1200	396.00	22.20	4.10	SI0U332000B3K__KP3C
0.390	B3	1200	468.00	22.50	4.00	SI0U392000B3K__KP3C
0.470	B3	1200	564.00	22.50	4.00	SI0U472000B3K__KP3C
0.560	B4	1000	560.00	22.70	3.80	SI0U562000B4K__KP3C
0.680	B4	1000	680.00	22.80	3.70	SI0U682000B4K__KP3C
0.750	C2	800	600.00	23.20	3.40	SI0U752000C2K__KP3C
0.820	C2	800	656.00	23.20	3.30	SI0U822000C2K__KP3C
1.000	C2	800	800.00	23.30	3.20	SI1U002000C2K__KP3C

Custom-designed capacitors are available on request

Refer to "Capacitor Drawing" on page 5 to 8

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Capacitor Drawings and Terminal Styles

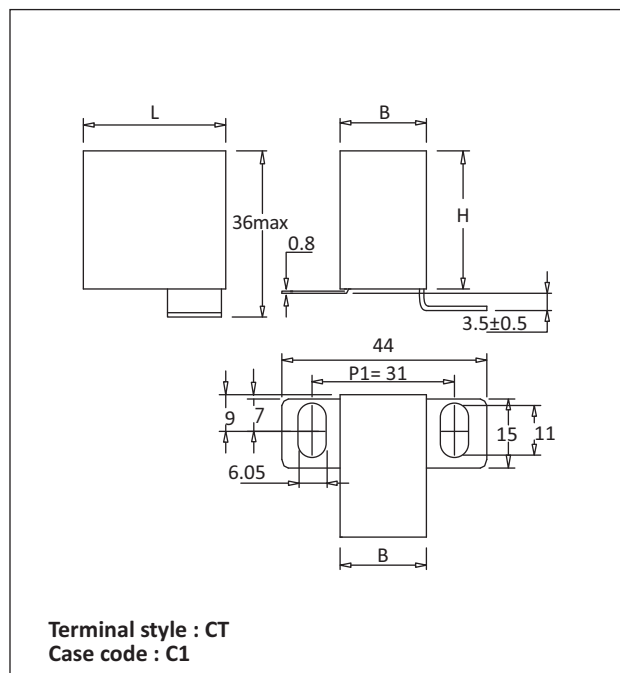
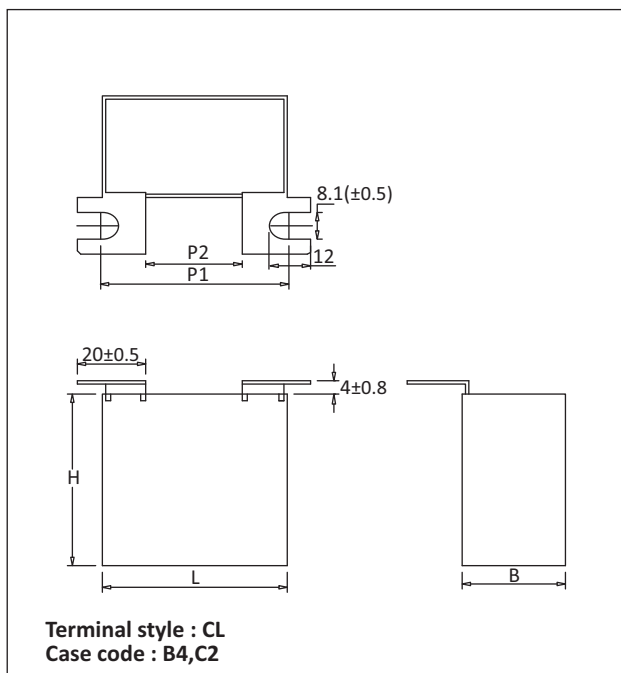
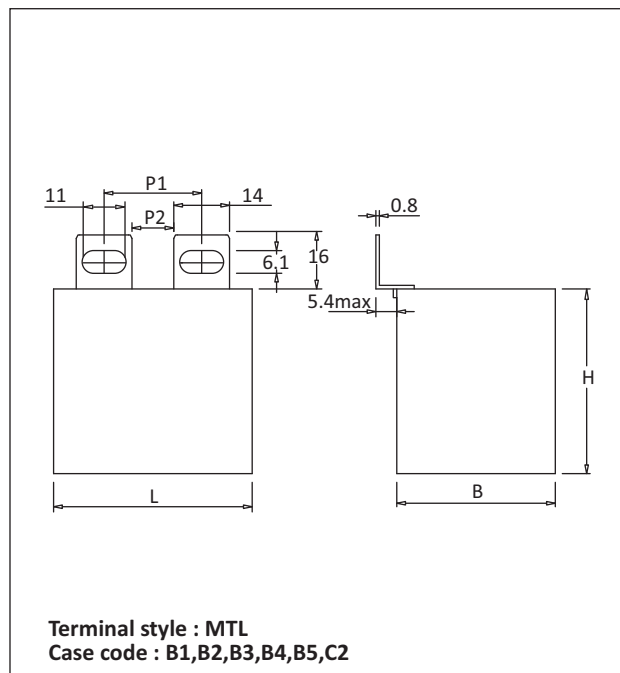
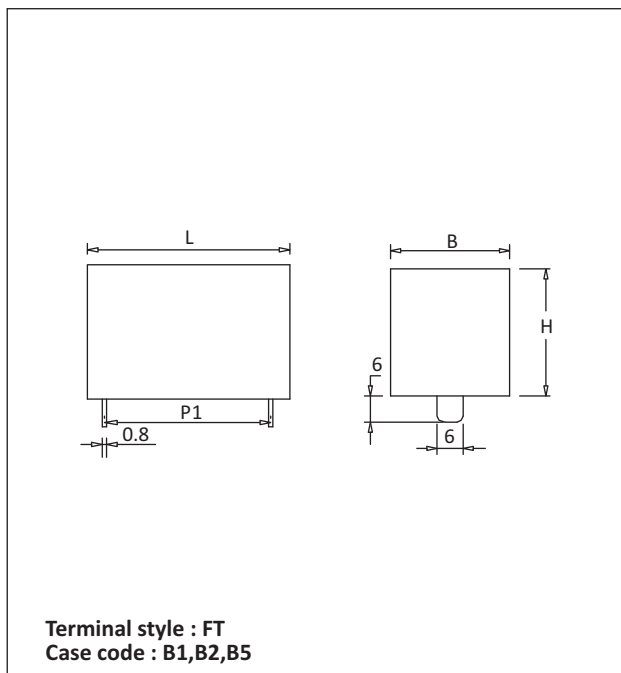


Dimensions in mm

For details see Case Code table on page 9

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Capacitor Drawings and Terminal Styles

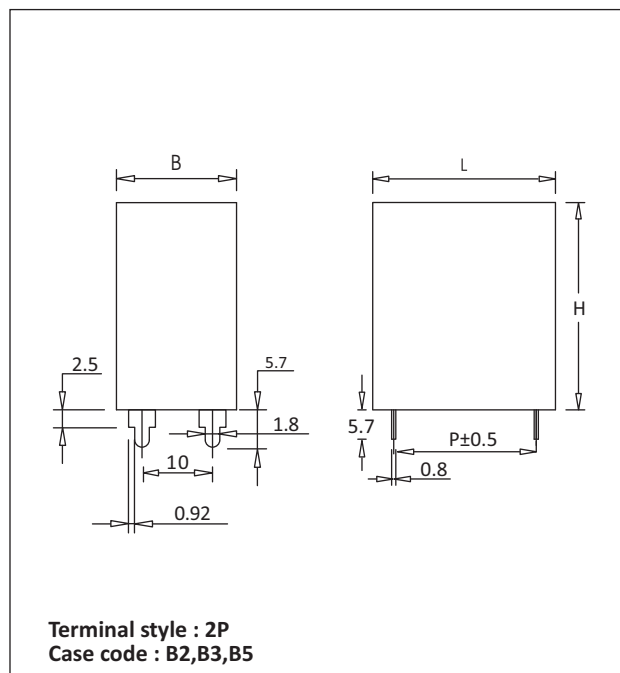
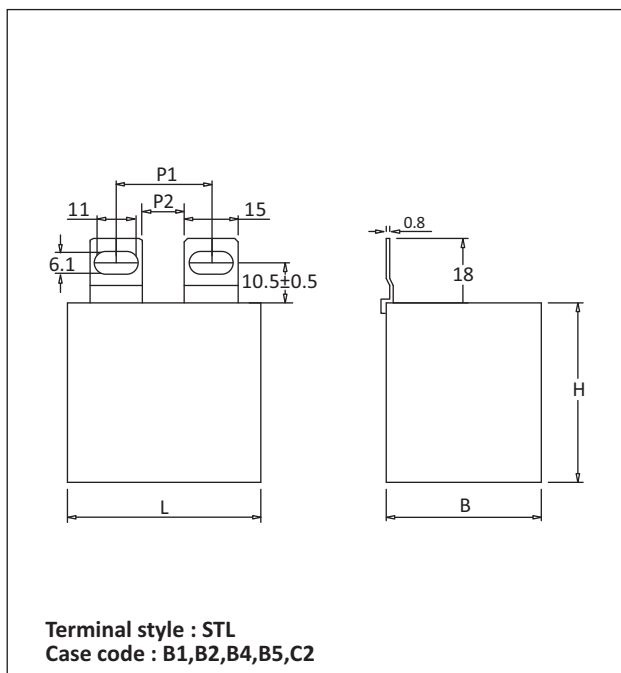
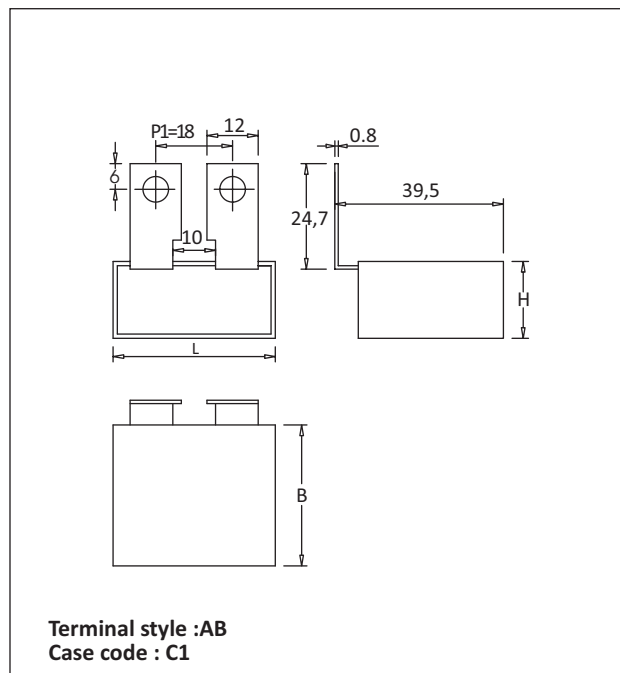
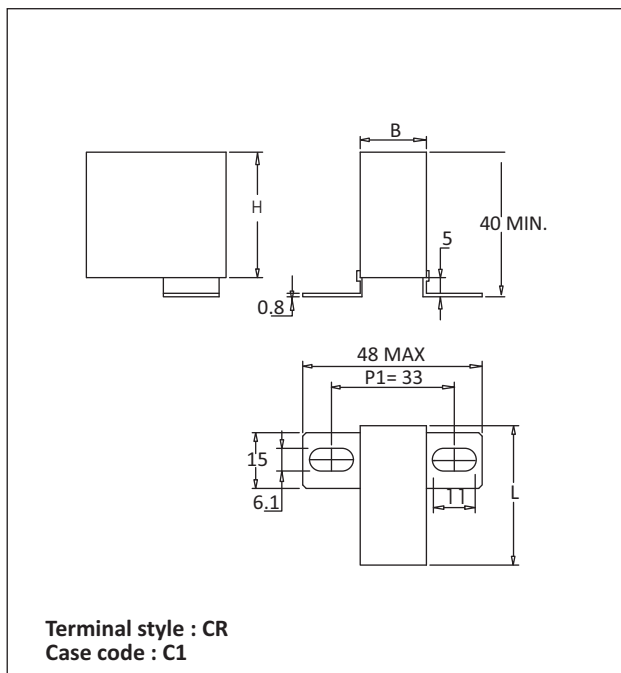


Dimensions in mm

For details see Case Code table on page 9

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Capacitor Drawings and Terminal Styles

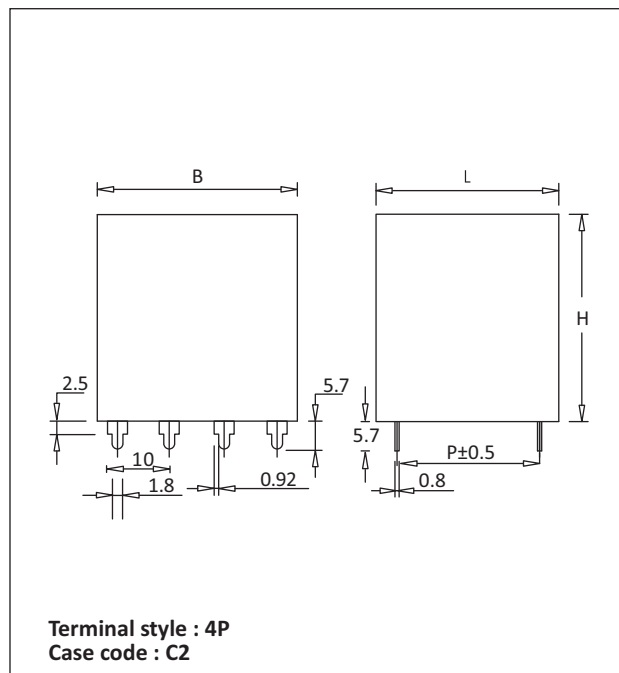
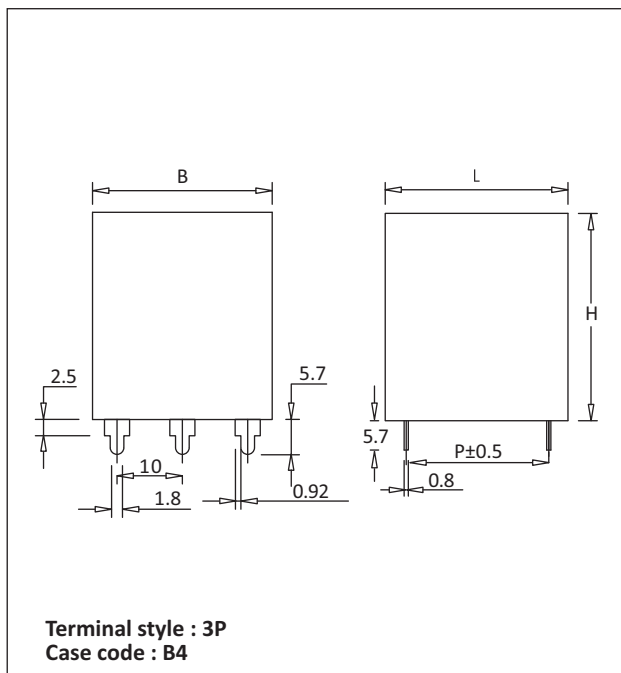


Dimensions in mm

For details see Case Code table on page 9

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Capacitor Drawings and Terminal Styles



Dimensions in mm

For details see Case Code table on page 9

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Table of Case Codes and Dimensions

Case Code	Dimensions in mm*			P1	P2	Terminal Styles
	B±1	H±1	L±1	P±0.5		
K2	11	20	32.0	27.5	--	DL
K3	13	22	32.0	27.5	--	DL
K4	14	24	32.0	27.5	--	DL
B1	17	29	41.5	32.5	—	DL,FT,2P
B1	17	29	41.5	39.0	—	DL,FT,2P
B1	17	29	41.5	25.5	8.5	TL,RL,STL,SL
B1	17	29	41.5	24.5	11.5	MTL
B2	24	38	45.0	27.0	11.5	TL,RL,STL,SL
B2	24	38	45.0	27.0	13.0	MTL
B3	30	45	45.0	39.0	-	FT,2P
B3	30	45	45.0	27.0	13.0	MTL
B3	30	45	45.0	27.0	11.5	TL,RL,STL,SL
B4	30	50	54.0	27.0	11.5	TL,RL,STL,SL
B4	30	50	54.0	48.0	—	3P
B4	30	50	54.0	55.0	28.0	CL
B4	30	50	54.0	27.0	13.0	MTL
B5	28	30	45.0	27.0	11.5	TL,RL,STL,SL
B5	28	30	45.0	27.0	13.0	MTL
B5	28	30	45.0	39.0	—	FT,2P
C1	18	33	38.0	33.0	—	CR
C1	18	33	38.0	31.0	—	CT
C1	18	33	38.0	18.0	—	AB
C2	43	50	54.0	27.0	11.5	TL,RL,STL,SL
C2	43	50	54.0	27.0	13.0	MTL
C2	43	50	54.0	55.0	28.0	CL
C2	43	50	54.0	48.0	—	4P

* Refer to "Capacitor Drawings" on page 5 to 8

Precaution

1. These capacitors are not suitable for 'across the line' applications
2. VAC(rated): Frequency should be less than 1000Hz
3. VDC(rated): $1.4 \times V_{rms} + VDC$ should be less than rated VDC