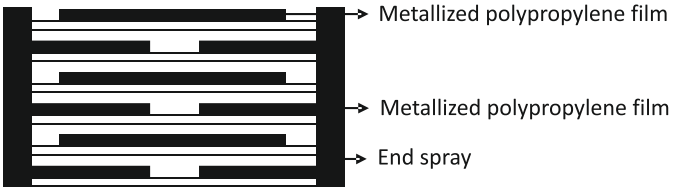
MKRS

Highlights

- Self-healing property
- High DV / DT
- Low ESR
- Low loss polypropylene dielectric
- Reference standard-IEC 61071
- Flame retardant UL94 - V0, ROHS compliant

Construction

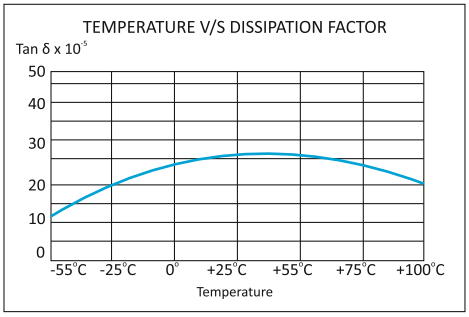
Extended double Metallized polyester electrodes with Metallized polypropylene dielectric internal series connection

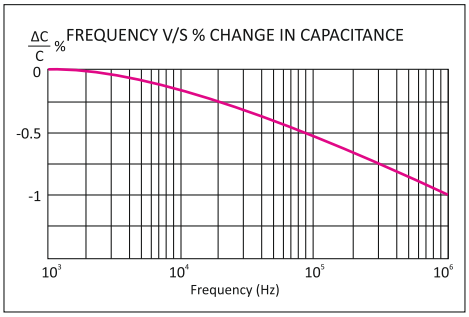


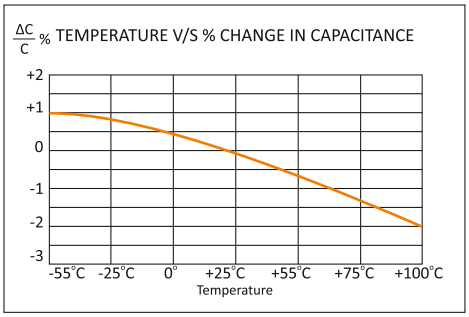
Applications

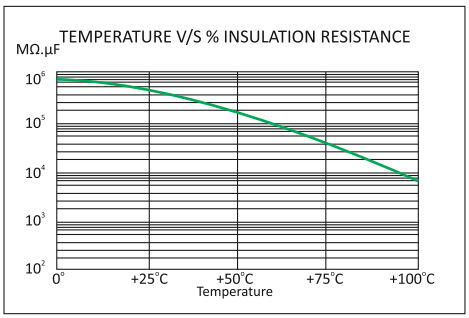
These capacitors are used in high voltage, high current and high pulse applications such as:

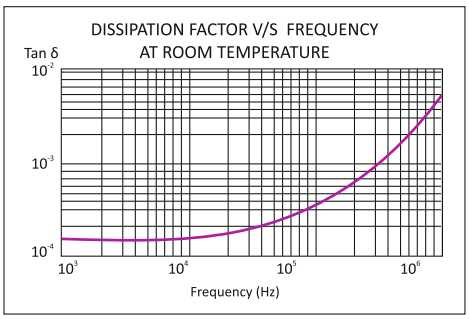
- IGBT protection circuits
- Snubber networks
- Energy conversion and control in power electronics
- Protection circuits in SMPS











MKRS

Technical Specifications

Physical Characteristics

▪ Dielectric material	Polypropylene film.
▪ Electrode material	Metallized polypropylene film.
▪ Winding construction	Metallized polypropylene dielectric internal series connection
▪ Enclosure	Preformed UL 94 V-0 plastic case with thermosetting resin-fill

Electrical Characteristics

▪ Capacitance range	0.1 MFD to 2.0 MFD
▪ Capacity tolerance	±5%(J), ±10%(K)
▪ Rated voltage VDC	600, 700, 1000, 1200, 1500, 2000, 2500
▪ Test voltage between terminals	1.5 x rated voltage VDC for 2 seconds
▪ Test voltage terminal to case	3KVAC at 50Hz for 60 seconds
▪ Dissipation factor (Tan d)	$\leq$0.0005 at 1 KHz and 25°C
▪ Temperature range	-40°C to +105°C
▪ Insulation resistance at 25°C & at a test voltage of 500 VDC applied for 1 minute	C $\leq$ 0.33 MFD $\geq$100,000MΩ C > 0.33 MFD $\geq$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 MKRS
- The capacitance value MFD
- The rated voltage VDC
- Capacity tolerance and manufacturing code
- Part number on non-standard capacitors

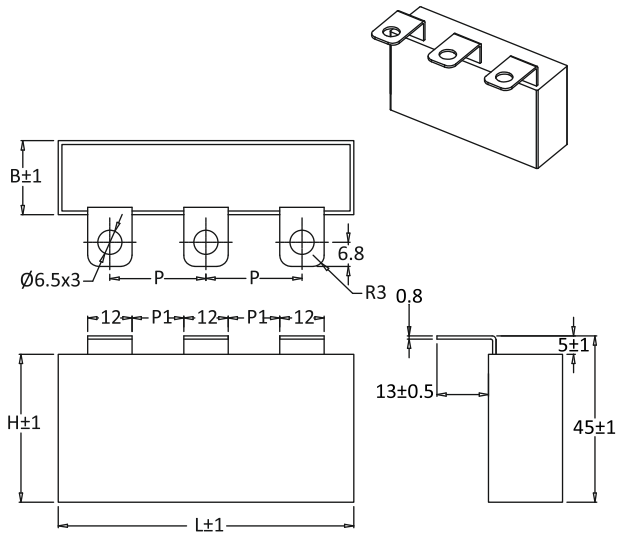
MKRS

Standard Capacitor Values

Rated Capacitance MFD	Rated DC Voltage	Rated AC Voltage	Case Code	Case Size			DV/DT V/µ Sec	I Peak Amps	Irms Max at 100KHz & 70°C Amps	Typical ESR at100KHz mΩ	Ordering Code*
				B	H	L					
0.1 +0.1	2500	700	H11	20	40	80	828	83	14	10.0	SI00U202500MKH11_ _ _ _ _01
0.15+0.15	2500	700	H11	20	40	80	828	124	15	7.2	SI00U302500MKH11_ _ _ _ _01
0.22 + 0.22	2000	600	H11	20	40	80	828	182	16	5.1	SI00U442000MKH11_ _ _ _ _01
0.33 + 0.33	2000	600	H11	20	40	80	828	273	17	4.1	SI00U662000MKH11_ _ _ _ _01
0.47+0.47	1500	500	H11	20	40	80	828	389	18	3.7	SI00U941500MKH11_ _ _ _ _01
0.68 + 0.68	1200	400	H11	20	40	80	828	563	19	3.3	SI01U361200MKH11_ _ _ _ _01
0.82 + 0.82	1200	400	H11	20	40	80	828	679	19	3.1	SI01U641200MKH11_ _ _ _ _01
1.0 + 1.0	1000	350	H11	20	40	80	828	828	20	3.0	SI000021000MKH11_ _ _ _ _01
1.2 + 1.2	1000	350	H11	20	40	80	828	994	20	2.8	SI02U401000MKH11_ _ _ _ _01
1.5 +1.5	700	250	H11	20	40	80	828	1242	21	2.7	SI000030700MKH11_ _ _ _ _01
1.75 + 1.75	700	250	H11	20	40	80	828	1449	22	2.5	SI03U500700MKH11_ _ _ _ _01
2.0 + 2.0	600	200	H11	20	40	80	828	1656	24	2.4	SI000040600MKH11_ _ _ _ _01

Capacitor Drawings and Terminal Styles

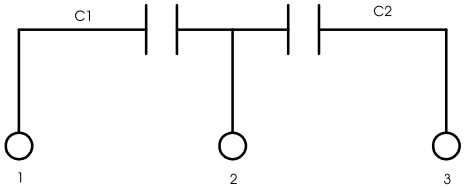
Style 3PLA



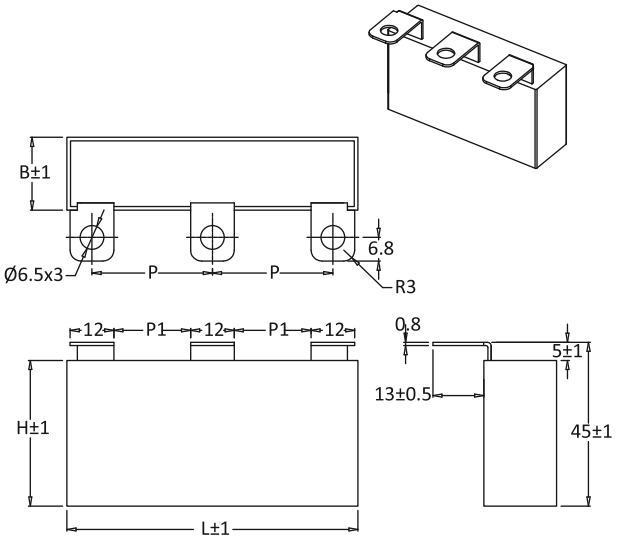
Dimension in mm.

P- 26.0 mm
P1- 14.0 mm

Circuit Symbol



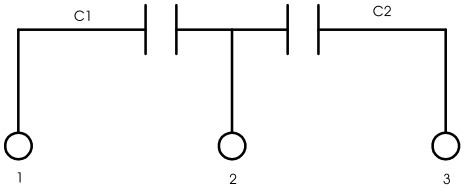
Style 3PLB



Dimension in mm.

P- 33.0 mm
P1- 21.0 mm

Circuit Symbol



Part Number System

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	**2**	**3 to 7**					**8 to 11**				**12 to 13**		**14 to 16**			**17 to 20**				**21**	**22 to 23**	

Standard / Non-standard

S - Standard

N - Non-standard

Series

A - Aluminium Electrolytic Capacitors

I - IGBT Snubber Capacitors

D - DC-Link Capacitors

P - Power Film Capacitors

Capacitance Rating

example : 00U68 - 0.680 MFD
01U50 - 1.50 MFD
00001 - 1.00 MFD
05U60 - 5.6 MFD
00003 - 3.00 MFD

Voltage Rating

example : 1000 - 1000 VDC/VRMS
0450 - 450 VDC/VRMS
0700 - 700 VDC/VRMS
2500 - 2500 VDC/VRMS

Grade

example : AG - KP3C
AJ - KP6
AK - MP4A
AM - MKR9
AN - MKRS

Case code

(Refer table)

Terminal Style

Refer Table
Drawing

Tolerance

M : ±20%
K : ±10%
J : ±5%

Canias Code

By Default - 01

Cautions For Proper Use Of Film Capacitors

SAFETY INSTRUCTION

- Do not exceed the upper category temperature (UCT).
- Do not apply any mechanical stress to the capacitor terminals.
- Avoid any compressive, tensile or flexural stress.
- Do not move the capacitor after it has been assembled
- Do not exceed the specified torque limits during assembly.
- Avoid external energy inputs, such as fire or electricity.
- Avoid overload of the capacitors.
- Consult us if application is with severe temperature and humidity condition.
- There are no serviceable or repairable parts inside the capacitor. Opening the capacitor or any attempts to open or repair the capacitor will void the warranty and liability of ALCON

DISPOSAL

For disposal do either of the followings.

1. Incineration (at high temperature over 800°C) after piercing or crushing capacitor body.
2. Consignment to specialists of industrial waste. As per the compliance prescribed by the law.

Notes