

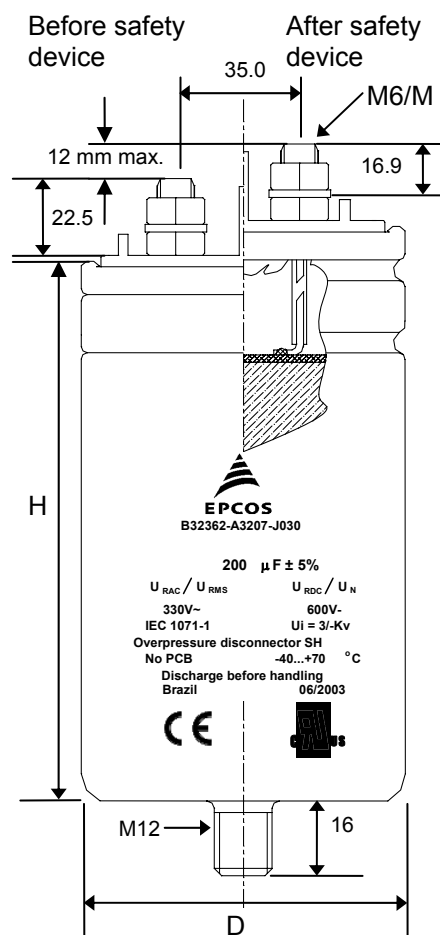


## **Power electronic capacitors**

General purpose applications

<b>Series/Type:</b>	<b>B3236x</b>
Date:	2006-07-04
Version:	2

**Metallized polypropylene film capacitors - aluminum case  
for general purpose applications**
**B32360 - fast-on terminals**

**Picture 1**
**B32361 / B32362 - screw terminals**

**Picture 2**

## Characteristics

Rated capacitance  $C_R$  3  $\mu\text{F}$  ... 600  $\mu\text{F}$  (see table)

Tolerance  $\pm 5\%$

Rated voltage AC $U_{R, AC} / U_{RMS}$	Rated voltage DC $U_{R, DC} / U_R$	Repetitive peak voltage $U_{max}$	Non repetitive peak voltage
250 V	450 V	450 V	550 V
330 V	600 V	600 V	700 V
480 V	850 V	850 V	1000 V

$I_{R, AC}$  RMS max at 60°C see table

$dv/dt$  see table

Transient inrush current 100 x  $I_{R, AC}$

## Test data

Voltage between terminals  $U_{TT}$  1.35 x  $U_{R, AC}$ , 2 s

Voltage terminals and aluminum can  $U_{TC}$  3000 V AC, 10 s

Dissipation factor  $\tan \delta$  at 50 Hz  $\leq 6.0 \times 10^{-4}$

Life test: IEC 1071-1/2

Life expectancy: 100 000 hours for  $U_{RMS} |\Delta C/C| \leq 3\%$

## Climatic Category

**-40/85/21**

Storage temperature:  $T_{min}$ : -40 °C,  $T_{max}$ : +85 °C

Operating temperature ambient with natural cooling: -40 °C ... +70 °C

Max. hot spot temperature: +85 °C

Max. permissible humidity: 95%

Max. permissible altitude: 2000 m above sea level

## General data

Resin filling Non PCB, soft polyurethane

Safety device Overpressure disconnecter, self-healing technology

Mounting and grounding Stud on bottom of aluminum can

Cooling Naturally air-cooled (or forced air cooling)

Degree of protection Indoor mounting

Reference standards IEC 1071

UL approval file E106388

**250 V AC/450 V DC**
**B32360 – fast-on terminals (picture 1)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
250 V AC (450 V DC)	10	B32360A2106J050	6	50	40	63	M8	0.1	45
	15	B32360A2156J050	10	50	40	63	M8	0.1	45
	20	B32360A2206J050	10	50	40	63	M8	0.1	45
	25	B32360A2256J050	12	50	40	63	M8	0.1	45
	30	B32360A2306J050	15	50	53	68	M8	0.2	12
	40	B32360A2406J050	20	50	53	68	M8	0.2	12
	50	B32360A2506J050	20	40	53	80	M8	0.2	12
	60	B32360A2606J050	20	30	53	80	M8	0.2	12
	70	B32360A2706J050	20	30	63.5	80	M12	0.3	12
	80	B32360A2806J050	20	25	63.5	80	M12	0.3	12
	100	B32360A2107J050	20	20	63.5	105	M12	0.4	12
	150	B32360A2157J050	20	15	63.5	142	M12	0.6	12

**B32361 – M6 screw terminals (picture 2)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
250 V AC (450 V DC)	50	B32361A2506J050	25	50	63.5	68	M12	0.3	12
	60	B32361A2606J050	25	40	63.5	68	M12	0.3	12
	70	B32361A2706J050	25	35	63.5	80	M12	0.3	12
	80	B32361A2806J050	25	30	63.5	80	M12	0.3	12
	100	B32361A2107J050	25	25	63.5	105	M12	0.4	12
	150	B32361A2157J050	25	15	63.5	132	M12	0.5	12
	200	B32361A2207J050	25	15	63.5	132	M12	0.5	12

**B32362 – M10 screw terminals (picture 2)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
250 V AC (450 V DC)	150	B32362A2157J050	35	25	75	120	M12	0.7	6
	200	B32362A2207J050	50	25	75	120	M12	0.7	6
	250	B32362A2257J050	40	15	75	155	M12	0.9	6
	300	B32362A2307J050	50	15	75	200	M12	1.1	6
	400	B32362A2407J050	50	15	85	200	M12	1.4	4
	500	B32362A2507J050	50	10	85	266	M12	1.9	4
	600	B32362A2607J050	50	10	85	266	M12	1.9	4

**330 V AC/600 V DC**
**B32360 – Fast-on terminals (picture 1)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
330 V AC (600 V DC)	10	B32360A3106J030	6	60	53	68	M8	0.2	12
	15	B32360A3156J030	10	60	53	68	M8	0.2	12
	20	B32360A3206J030	12	60	53	68	M8	0.2	12
	25	B32360A3256J030	15	60	53	68	M8	0.2	12
	30	B32360A3306J030	15	50	53	80	M8	0.2	12
	40	B32360A3406J030	12	30	53	105	M8	0.3	12
	50	B32360A3506J030	15	30	53	105	M8	0.3	12
	60	B32360A3606J030	18	30	63.5	105	M12	0.4	12
	70	B32360A3706J030	20	30	63.5	105	M12	0.4	12
	80	B32360A3806J030	20	25	63.5	105	M12	0.4	12
	100	B32360A3107J030	20	20	63.5	142	M12	0.6	12

**B32361 - M6 screw terminals (picture 2)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
330 V AC (600 V DC)	50	B32361A3506J030	15	30	63.5	105	M12	0.4	12
	60	B32361A3606J030	18	30	63.5	105	M12	0.4	12
	70	B32361A3706J030	20	30	63.5	105	M12	0.4	12
	80	B32361A3806J030	25	30	63.5	105	M12	0.4	12
	100	B32361A3107J030	20	20	63.5	142	M12	0.6	12

**B32362 – M10 screw terminals (picture 2)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
330 V AC (600 V DC)	100	B32362A3107J030	30	30	75	120	M12	0.7	6
	150	B32362A3157J030	30	20	75	155	M12	0.9	6
	200	B32362A3207J030	40	20	75	155	M12	0.9	6
	250	B32362A3257J030	50	20	85	200	M12	1.4	4
	300	B32362A3307J030	50	15	85	200	M12	1.4	4
	400	B32362A3407J030	50	10	85	270	M12	2.0	4

**480 V AC/850 V DC**
**B32360 – Fast-on terminals (picture 1)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight kg	Packing unit
480 V AC (850 V DC)	3	B32360A4305J080	3	70	40	63	M8	0.1	45
	5	B32360A4505J080	5	70	40	63	M8	0.1	45
	10	B32360A4106J080	10	70	53	68	M8	0.2	12
	15	B32360A4156J080	15	70	53	68	M8	0.2	12
	20	B32360A4206J080	15	50	53	80	M8	0.2	12
	25	B32360A4256J080	12	30	53	105	M8	0.3	12
	30	B32360A4306J080	15	30	53	105	M8	0.3	12
	40	B32360A4406J080	20	30	63.5	105	M12	0.4	12
	50	B32360A4506J080	20	30	63.5	105	M12	0.4	12
	60	B32360A4606J080	20	30	63.5	132	M12	0.5	12
	70	B32360A4706J080	20	30	63.5	142	M12	0.6	12

**B32361 - M6 screw terminals (picture 2)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight Kg	Packing unit
480 V AC (850 V DC)	20	B32361A4206J080	20	70	63.5	68	M12	0.3	12
	25	B32361A4256J080	25	70	63.5	80	M12	0.3	12
	30	B32361A4306J080	25	60	63.5	80	M12	0.3	12
	40	B32361A4406J080	20	30	63.5	105	M12	0.4	12
	50	B32361A4506J080	25	30	63.5	105	M12	0.4	12
	60	B32361A4606J080	25	30	63.5	132	M12	0.5	12
	70	B32361A4706J080	25	30	63.5	142	M12	0.6	12

**B32362 – M10 screw terminals (picture 2)**

$U_R$ V	$C_R$ $\mu F$	Ordering code	$I_{RMS, max}$ A	$dv/dt$ V/ $\mu s$	D mm	H mm	Stud	Weight Kg	Packing unit
480 V AC (850 V DC)	60	B32362A4606J080	30	30	75	120	M12	0.7	6
	70	B32362A4706J080	50	30	75	150	M12	0.8	6
	80	B32362A4806J080	50	30	75	150	M12	0.9	6
	100	B32362A4107J080	50	30	75	200	M12	1.1	6
	150	B32362A4157J080	50	30	85	200	M12	1.4	4
	200	B32362A4207J080	50	15	85	250	M12	1.8	4
	250	B32362A4257J080	50	10	85	270	M12	2.0	4

## **Cautions and warnings**

- In case of dents of more than 1 mm depth or any other mechanical damage, capacitors must not be used at all. This applies also in cases of leakage.
- To ensure the full functionality of the overpressure disconnecter, elastic elements must not be hindered and a minimum space of 12 mm has to be kept above each capacitor.
- Check tightness of the connections/terminals periodically.
- The energy stored in capacitors may be lethal. To prevent any chance of shock, discharge and short-circuit the capacitor before handling.
- Failure to follow cautions may result, worst case, in premature failures, bursting and fire.
- EPCOS AG is not responsible for any kind of possible damages to persons or things due to improper installation and application of capacitors for power electronics.

## **Safety**

- Electrical or mechanical misapplication of capacitors may be hazardous. Personal injury or property damage may result from bursting of the capacitor or from expulsion of oil or melted material due to mechanical disruption of the capacitor.
- Ensure good, effective grounding for capacitor enclosures.
- Observe appropriate safety precautions during operation (self-recharging phenomena and the high energy contained in capacitors).
- Handle capacitors carefully, because they may still be charged even after disconnection
- The terminals of capacitors, connected bus bars and cables as well as other devices may also be energized.
- Follow good engineering practice.

## **Thermal load**

After installation of the capacitor it is necessary to verify that maximum hot-spot temperature is not exceeded at extreme service conditions.

## **Mechanical protection**

The capacitor has to be installed in a way that mechanical damages and dents in the aluminum can are avoided.

## **Storage and operating conditions**

Do not use or store capacitors in corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. In dusty environments regular maintenance and cleaning especially of the terminals is required to avoid conductive path between phases and/or phases and ground.

**Overpressure disconnecter**

To ensure full functionality of an overpressure disconnecter, the following must be observed:

1. The elastic elements must not be hindered, i.e.
  - connecting lines must be flexible leads (cables).
  - there must be sufficient space for expansion above the connections.
  - folding crimps must not be retained by clamps.
2. Stress parameters of the capacitor must be within the IEC61071 specification.

**Service life expectancy**

Electrical components do not have an unlimited service life expectancy; this applies to self-healing capacitors too. The maximum service life expectancy may vary depending on the application the capacitor is used in.



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