



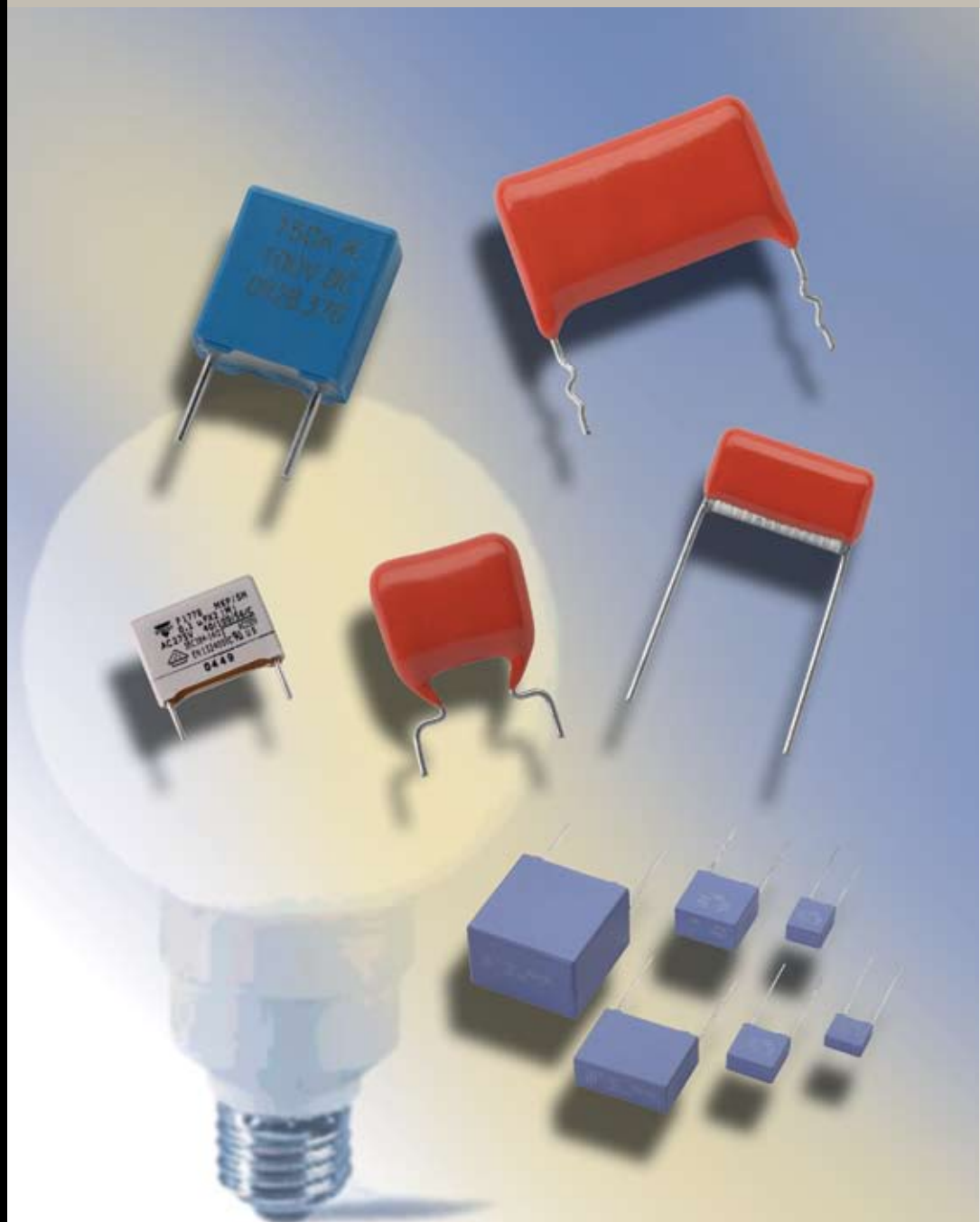
VISHAY INTERTECHNOLOGY, INC.

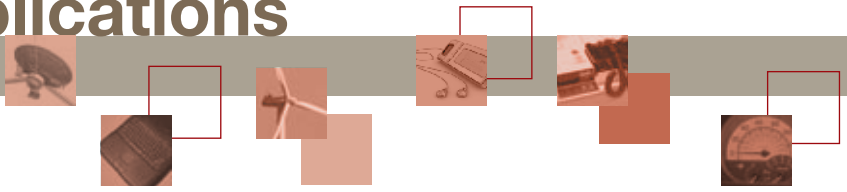
CAPACITORS

LIGHTING APPLICATIONS

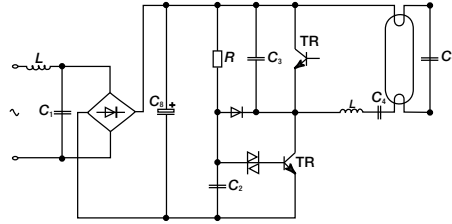
Film Capacitors

CAPABILITIES

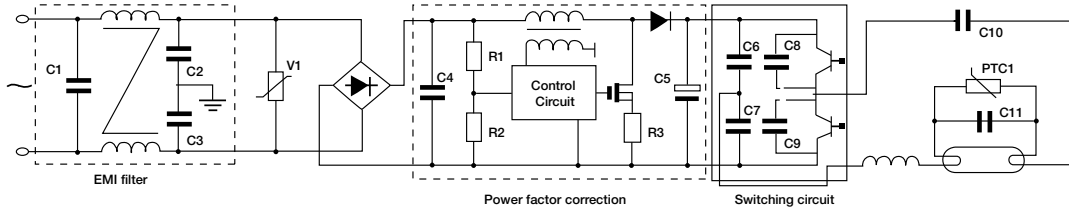




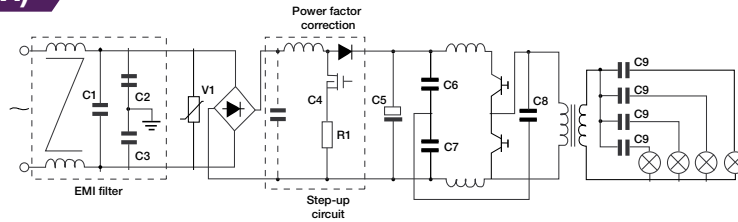
CFL



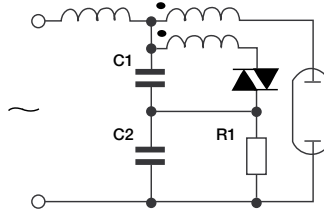
Electronic Ballast (Europe)



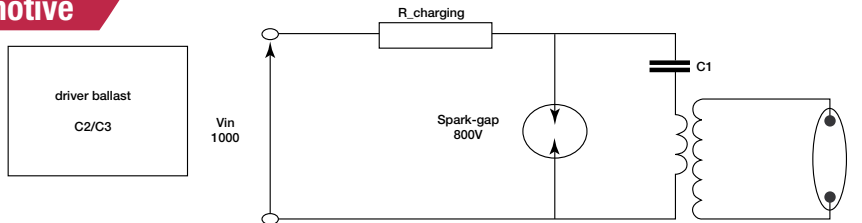
Electronic Ballast (USA)



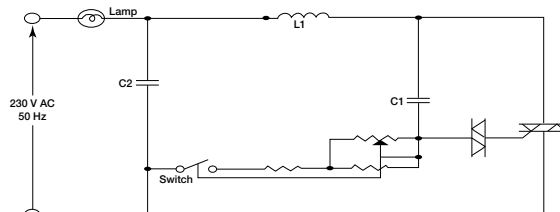
HID Lamp Consumer

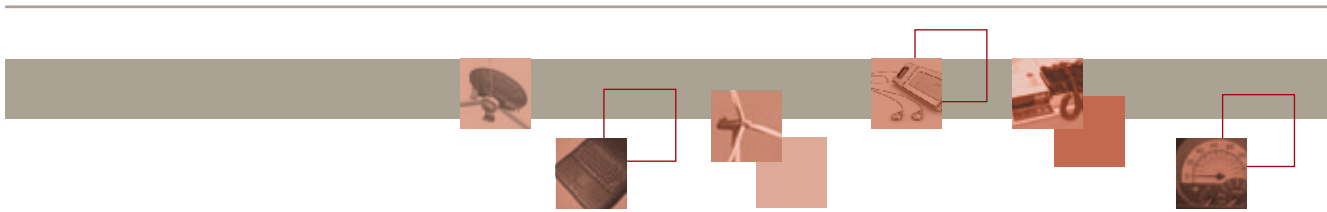


HID Lamp Automotive

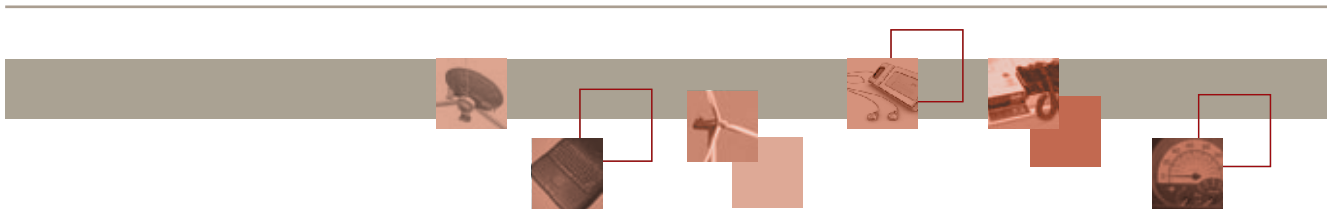


Lamp Dimmer





Key	Function	Series	Range Capacitance	Version
C2-C3	Half bridge	467/468	18 – 150 nF	Lacquered
		4719	18 – 150 nF	Lacquered
C4	Lamp capacitor	365/366/367	1,0 – 10 nF	Lacquered
		3659/3679	1,0 – 10 nF	Lacquered
		4719	1,0 – 10 nF	Lacquered
Key	Function	Series	Range Capacitance	Version
C1	EMI X2	339/1778	10 – 470 nF	Boxed
C2-C3	EMI Y2	338.6/1710	2.2 – 8.2 nF	Boxed
C4	Decoupling	468/479	100nF – 1.2 µF	Lacquered
C6-C7	Half bridge	303/304/468	100 – 470 nF	Half lacquered / lacquered
C10	Blocking	479/383/1841M	15 – 220 nF	Lacquered / boxed
C11	Striking / lamp cap.	383/385	2.2 – 10 nF	Boxed
Key	Function	Series	Range Capacitance	Version
C1	EMI X2	339/1778	10 – 470 nF	Boxed
C2-C3	EMI Y2	338.6/1710	2.2 – 8.2 nF	Boxed
C4	Decoupling	468/479	100nF – 1.2 µF	Lacquered
C6-C7	Half bridge	303/304/468	100 – 470 nF	Half lacquered / lacquered
C8-C9	Resonant cap.	383/385	1,0 – 10 nF	Boxed
Key	Function	Series	Range Capacitance	Version
C1/C2	Resonant cap.	383/1841M	47 – 150 nF	Boxed
Key	Function	Series	Range Capacitance	Version
C1	Ignition cap.	312	70 – 120 nF	Customised
C2/C3	Half bridge	373/1820	220 – 1000 nF	Boxed / customised
Key	Function	Series	Range Capacitance	Version
C1	Timer	467/468/373	22 – 220 nF	Lacquered / boxed
C2	Interference suppression	467/468/373	22 – 220 nF	Lacquered / boxed

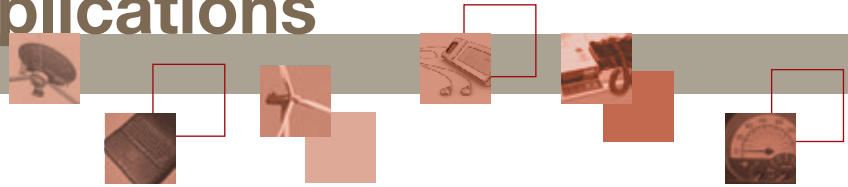


Voltage Range	Temperature Range (°C)	Tolerance (%)	Features	365 Series
250 Vdc	- 55 to 105	10	• Excellent healing	
250 Vdc	- 55 to 150	10	• High temperature PEN-dielectric	
400/630 Vdc	- 55 to 105	10	• Extended range	
700 Vdc	- 55 to 105	10	• Serie-construction	
700 Vdc	- 55 to 150	10	• High temperature PEN-dielectric	
Voltage Range	Temperature Range (°C)	Tolerance (%)	Features	303-304 Series
275Vac/305 Vac	- 55 to 105	20/10	• Smallest dimensions	
300Vac/305 Vac	- 55 to 105	20/10	• Broad range	
400/630 Vdc	- 55 to 105	10/5	• Long life	
400 Vdc	- 55 to 105	20/10	• Slim design	
400/630 Vdc	- 55 to 105	5	• Low dissipation factor	
1000/1400/1600 Vdc	- 55 to 105	5	• High pulse load capability	
Voltage Range	Temperature Range (°C)	Tolerance (%)	Features	339/1778 Series
275Vac/305 Vac	- 55 to 105	20/10	• Smallest dimensions	
300Vac/305 Vac	- 55 to 105	20/10	• Broad range	
400/630 Vdc	- 55 to 105	10/5	• Long life, extended range	
400 Vdc	- 55 to 105	20/10	• Excellent healing	
1600-2000 Vdc	- 55 to 105	5	• High pulse load capability	
Voltage Range	Temperature Range (°C)	Tolerance (%)	Features	383 Series
400-1400 Vdc	- 55 to 105	5	• High pulse load capability	
Voltage Range	Temperature Range (°C)	Tolerance (%)	Features	370 Series
1000 Vdc	- 55 to 170	10	• PEN-dielectric, excellent dv/dt	
400 Vdc	- 55 to 125	10/5	• High performing DC-cap	
Voltage Range	Temperature Range (°C)	Tolerance (%)	Features	468 Series
250 Vdc	- 55 to 105	10	• Long life, excellent stability	
630 Vdc	- 55 to 105	10	• Good surge voltage handling	



Lighting Applications

Film Capacitors



Vishay offers to design engineers a wide range of high-quality film capacitors for all kinds of lighting applications, including HF ballasts, compact fluorescent lamps, high-intensity discharge lamps, and igniter units for high-pressure lamps. The Vishay product portfolio includes capacitors based on polyester, polypropylene, and high-temperature PEN dielectrics.

The new Vishay BCcomponents MKP 339 series of X2 RFI capacitors features capacitance values from 0.001 μF to 4.7 μF . Quality and reliability approvals include IEC 60384-14 2nd edition and EN 132400, UL, CSA, and CQC. Available capacitance tolerances are $\pm 20\%$ and $\pm 10\%$. MKP 339 capacitors are offered in case sizes that are smaller than those previously available. In addition, the height profile of products with C-values greater than 100 nF is reduced by 1 mm to 2 mm. As a result, the capacitors are especially useful in applications where board space is limited and mounting height is restricted.

The boxed MMKP 383 series capacitors are based on a double metallized electrode design that utilizes a polypropylene dielectric and meets performance grade 1 (long life standards). These devices are very well suited for electronic lighting ballasts and resonance applications. Features include a capacitance range from 470 pF to 2.7 μF , high pulse load, and high current capabilities with rated voltages up to 2500 Vdc and 900 Vac respectively. The small dimensions and low-profile design of the capacitors make them ideal for electronic ballast applications. MMKP 383 capacitors are available in loose packaging or tape-on-reel in 15 mm, 22.5 mm, and 27.5 mm, as well as 7.5-mm bent back pitch.

In new automotive lighting systems, xenon HID lamps are used to provide enhanced driver safety and comfort. Vishay's MKN 312 capacitors have the specifications needed to activate xenon bulbs, including capacitance value from 70 nF to 120 nF, rated voltage of 800 Vdc, and pulse load of 25000 V/ μs , and operate reliably in high-temperatures up to 150 °C. The capacitors are based on the new PEN film technology that enables exceptional performance at high temperatures.

Increasing emphasis on caring for the environment and reducing energy consumption has resulted in increased usage of compact fluorescent lamps (CFLs). Vishay offers a dedicated range of MKT 365-367 film capacitors for use in standard CFLs. For high-performance CFLs, Vishay offers the MKN 4719 series of capacitors, which is suitable for usage at temperatures above 125 °C.

Many Vishay products are designed to fulfill the RoHS directives issued by the European Union (Directive 2002/95/EC). The products described in this brochure are completely RoHS-compliant and suitable for usage in lead (Pb)-free soldering processes.





SEMICONDUCTORS:

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WORLDWIDE SALES CONTACTS

THE AMERICAS

UNITED STATES

VISHAY AMERICAS
ONE GREENWICH PLACE
SHELTON, CT 06484
UNITED STATES
PH: +1-402-563-6866
FAX: +1-402-563-6296

ASIA

SINGAPORE

VISHAY INTERTECHNOLOGY
ASIA PTE LTD.
25 TAMPINES STREET 92
KEPPEL BUILDING #02-00
SINGAPORE 528877
PH: +65-6788-6668
FAX: +65-6788-0988

P.R. CHINA

VISHAY TRADING (SHANGHAI) CO., LTD.
15D, SUN TONG INFOPORT PLAZA
55 HUAI HAI WEST ROAD
SHANGHAI 200030
P.R. CHINA
PH: +86-21-5258 5000
FAX: +86-21-5258 7979

JAPAN

VISHAY JAPAN CO., LTD.
MG IKENOHATA BLDG. 4F
1-2-18, IKENOHATA
TAITO-KU
TOKYO 110-0008
JAPAN
PH: +81-3-5832-6210
FAX: +81-3-5832-6260

EUROPE

GERMANY

VISHAY EUROPE SALES GMBH
GEHEIMRAT-ROSENTHAL-STR. 100
95100 SELB
GERMANY
PH: +49-9287-71-0
FAX: +49-9287-70435

FRANCE

VISHAY S.A.
199, BLVD DE LA MADELEINE
06003 NICE, CEDEX 1
FRANCE
PH: +33-4-9337-2920
FAX: +33-4-9337-2997

UNITED KINGDOM

VISHAY LTD.
PALLION INDUSTRIAL ESTATE
SUNDERLAND SR4 6SU
UNITED KINGDOM
PH: +44-191-514-4155
FAX: +44-191-567-8262