Axial Diodes & Protection

Diotec Semiconductor

Ø x L [mm]	Ø 1.9 x 3.9	Ø 2.6 x 5.1	Ø 3.0 x 6.3	Ø 4.5 x 7.5	Ø 5.4 x 7.5	Ø 8 x 7.5	Ø 8 x 7.5	Ø x L [mm]
	DO-35 Glass	DO-41 Plastic	DO-15	~ DO-201			Low R_{thL}	
								
	0.5 wire	0.7 wire	0.8 wire	1.2 wire	1.2 wire	1.2 wire	1.6 wire	
P_{tot}	500 mW	1.3 W / 2 W	3 W	5 W				P_{tot}
V_Z 1 ...		ZPY1	3EZ1					1 ... V_Z
... 3.9	ZPD2.7 ... ZPD3.9							... 3.9
... 5.6	ZPD4.3 ... ZPD5.6	ZPY5.6	ZY5.6					... 5.6
... 10	ZPD6.2 ... ZPD10	ZPY6.2 ... ZPY10	ZY6.2 ... ZY10	3EZ6.2 ... 3EZ10	1N5345B ... 1N5347B			... 10
... 100	ZPD11 ... ZPD75	ZPY11 ... ZPY200	ZY11 ... ZY200	3EZ11 ... 3EZ200	1N5348B ... 1N5388B			... 100
... 200								... 200
[V]								[V]
Zener								Zener
P_{PPM}		400 W	600 W		1500 W	5000 W		P_{PPM}
V_{BR}								V_{BR}
... 10			BZW04-5V8...8V5	BZW06-5V8...8V5		5KP6.5(A)...8.5(A)		... 10
			P4KE6.8(A)...10(A)	P6KE6.8(A)...10(A)	1.5KE6.8(A)...10(A)			
... 200			BZW04-9V4...171	BZW06-9V4...171		5KP9.0(A)...110(A)		... 200
			4KE11(A)...200(A)	6KE11(A)...200(A)	1.5KE11(A)...200(A)			
... 520			BZW04-188...376	BZW06-188...376				... 520
			P4KE220(A)...440(A)	P6KE220(A)...440(A)	1.5KE220(A)...440(A)			
uni-directional TVS								uni-directional TVS
... 10			BZW04-5V8B...8V5B	BZW06-5V8B...8V5B		5KP6.5C(A)...8.5C(A)		... 10
			P4KE6.8C(A)...10C(A)	P6KE6.8C(A)...10C(A)	1.5KE6.8C(A)...10C(A)			
... 200			BZW04-9V4B...171B	BZW06-9V4B...171B		5KP9.0C(A)...120C(A)		... 200
			P4KE11C(A)...200C(A)	P6KE11C(A)...200C(A)	1.5KE11C(A)...200C(A)			
... 520			BZW04-188B...376B	BZW06-188B...376B				... 520
			P4KE220C(A)...440C(A)	P6KE220C(A)...520C(A)	1.5KE220C(A)...440C(A)			
bi-directional TVS								bi-directional TVS
P_{PPM}		600 W		400 W	700 W	750 W	750 W	P_{PPM}
V_R								V_R
				F5K120	F11K120	F12K120	FX20K120	120
				I_{FAV} = 5 A	I_{FAV} = 11 A	I_{FAV} = 12 A	I_{FAV} = 20 A	
600					Protectifiers®			
Snubber Circuit								Protectifiers®
P_{tot}	1 W							P_{tot}
28...36	DB3							28...36 V_{BO}
30...34	DB31							30...34
32...36	DB32							32...36
35...45	DB4							35...45
Diacs								Diacs

Nomenclature for TVS diodes

No suffix	–	±10% tolerance of V_{BR}
Suffix "A"	–	± 5% tolerance of V_{BR}
Bidirectional	–	Suffix "B", "C" or "CA"
BZW & 5KP	–	Nominal voltage is V_{WM}
PxKE & 1.5KE	–	Nominal voltage is V_{BR}

A snubber circuit is used to protect the switching MOSFET on the primary side of flyback converters.

The parts on the left offer a 2-in-1 solution, combining a TVS diode with either a standard, fast or ultrafast rectifier in a single package.

Snubber Circuit

PKC-136

V_{BR} = 160 V

Ultrafast

Diacs, also called Trigger Diodes, are used to trigger Triacs or Thyristors at a defined AC mains level.

Protectifiers® are "Protected Rectifiers": They combine a **low forward voltage drop** with **high reverse robustness** at **fast switching speed**.

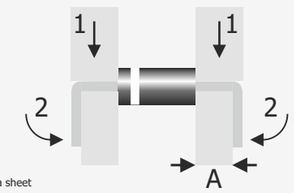

Fig. 1

Fig. 2

Fig. 3

It is not admissible to bend axial leads without strain-relief. Prior to bending, the leads must be fixed to avoid mechanical stress to the case and the internal structure of the diode, see Fig. 1. Minimum distance "A" between case and bending point must be 2 mm. On request, Diotec offers lead forming according to your specifications, e. g. according Fig. 2 or 3.

For complete mechanical and electrical data refer to data sheet