



BYW29E-200

Ultrafast power diode

17 September 2013

Product data sheet

1. General description

Ultrafast power diode in a SOD59 (2-lead TO-220AC) plastic package.

2. Features and benefits

- Fast switching
- Guaranteed ESD capability
- High thermal cycling performance
- Low on-state loss
- Low thermal resistance
- Rugged: reverse voltage surge capability
- Soft recovery minimizes power-consuming oscillations

3. Applications

- Output rectifiers in high-frequency switched-mode power supplies

4. Quick reference data

Table 1. Quick reference data

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{RRM}	repetitive peak reverse voltage		-	-	200	V
$I_{F(AV)}$	average forward current	SQW; $\delta = 0.5$; $T_{mb} \leq 128$ °C; Fig. 1 ; Fig. 2	-	-	8	A
Static characteristics						
V_F	forward voltage	$I_F = 8$ A; $T_j = 150$ °C; Fig. 4	-	0.8	0.895	V
Dynamic characteristics						
t_{rr}	reverse recovery time	$I_F = 1$ A; $V_R = 30$ V; $dI_F/dt = 100$ A/s; $T_j = 25$ °C; ramp recovery; Fig. 5 ; Fig. 7	-	20	25	ns
Electrostatic discharge						
V_{ESD}	electrostatic discharge voltage	HBM; C = 250 pF; R = 1.5 k Ω	-	-	8	kV

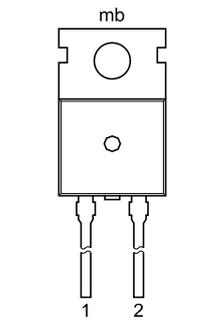
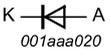


Scan or click this QR code to view the latest information for this product



5. Pinning information

Table 2. Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	K	cathode	 <p>TO-220AC (SOD59)</p>	 <p>001aaa020</p>
2	A	anode		
mb	mb	mounting base; cathode		

6. Ordering information

Table 3. Ordering information

Type number	Package		
	Name	Description	Version
BYW29E-200	TO-220AC	plastic single-ended package; heatsink mounted; 1 mounting hole; 2-lead TO-220AC	SOD59

7. Limiting values

Table 4. Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions	Min	Max	Unit
V_{RRM}	repetitive peak reverse voltage		-	200	V
V_{RWM}	crest working reverse voltage		-	200	V
V_R	reverse voltage		-	200	V
$I_{F(AV)}$	average forward current	SQW; $\delta = 0.5$; $T_{mb} \leq 128\text{ °C}$; Fig. 1 ; Fig. 2	-	8	A
I_{FRM}	repetitive peak forward current	SQW; $\delta = 0.5$; $t_p = 25\ \mu\text{s}$; $T_{mb} \leq 128\text{ °C}$	-	16	A
I_{FSM}	non-repetitive peak forward current	SIN; $t_p = 8.3\text{ ms}$; $T_{j(\text{init})} = 25\text{ °C}$	-	88	A
		SIN; $t_p = 10\text{ ms}$; $T_{j(\text{init})} = 25\text{ °C}$	-	80	A
I_{RRM}	repetitive peak reverse current	$\delta = 0.001$; $t_p = 2\ \mu\text{s}$	-	0.2	A
I_{RSM}	non-repetitive peak reverse current	$t_p = 100\ \mu\text{s}$	-	0.2	A
T_{stg}	storage temperature		-40	150	°C