

## STUD TYPE AVALANCE DIDOE

### Features

- Hermetic metal case with ceramic insulator
- High surge current capabilities
- Stud cathode and stud anode version

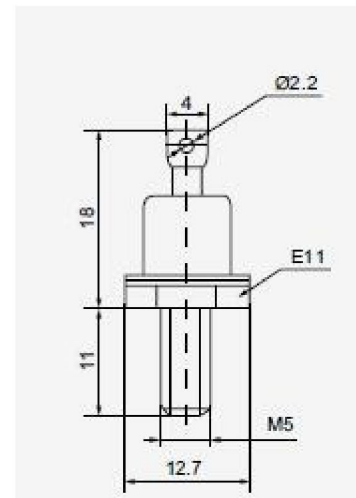
25A

### Typical Applications

- Converters
- Power supplies
- Machine tool controls

### Major Ratings and Characteristics

Parameters	ZB25A(R)	Units	
$I_{F(AV)}$	25	A	
@ $T_{hs}$	100	°C	
$I_{F(RMS)}$	40	A	
$I_{FSM}$	@ 50Hz	370	A
	@ 60Hz	400	A
$I^2 t$	@ 50Hz	700	A <sup>2</sup> s
	@ 60Hz	660	A <sup>2</sup> s
$V_{RRM}$	400-1600	V	
$T_J$	- 40 to 180	°C	



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## ELECTRICAL SPECIFICATIONS

### Voltage Ratings

ZB25A(R)	Voltage Code	$V_{RRM}$ , maximum repetitive peak reverse voltage V	$V_{RSM}$ , maximum non-repetitive peak rev. voltage V	$I_{RRM}$ max. @ $T_J = T_{Jmax}$ . mA
	04	400	500	5
08	800	900		
12	1200	1300		
16	1600	1700		

### Forward Conduction

Parameter	ZB25A(R)	Units	Conditions
$I_{F(AV)}$ Max. average forward current @ Heatsink temperature	25	A	180° conduction, half sine wave
	100	°C	
$I_{F(RMS)}$ Max.RMS forward current	40	A	
$I_{FSM}$ Max. peak, one-cycle forward, non-repetitive surge current	370	A	t = 10ms $T_{VJ}=45^{\circ}C$
	400		t = 8.3ms $V_{Rm}=0$
	300		t = 10ms $T_{VJ}=T_{VJM}$
	300		t = 8.3ms $V_{Rm}=100\%$
$I^2 t$ Maximum $I^2 t$ for fusing	700	$A^2 s$	t = 10ms $T_{VJ}=25^{\circ}C$
	660		t = 8.3ms $V_{Rm}=0$
	640		t = 10ms $T_{VJ}=T_{VJMax}$
	620		t = 8.3ms $V_{Rm}=100\%$
$V_{FM}$ Max forward voltage drop	1.30	V	$I_{FM}=79A, T_J=25^{\circ}C, t_p=400\mu s$
$V_{F(TO)}$ Threshold voltage	0.85	V	For power-loss calculations only
$r_T$ Forward slope resistance	8	mΩ	$T_{VJ}=T_{VJM}$

### Thermal and Mechanical Specification

Parameter	ZB25A(R)	Units	Conditions
$T_J$ Max.junction operating temperature range	-40 to 180	°C	
$T_{stg}$ Max. storage temperature range	-40 to 200		
$R_{thJC}$ Max,thermal resistance,junction to case	1.50	K/W	DC operation
$R_{thCS}$ Max. thermal resistance,Case to heatsink	0.60		DC operation single side cooled
wt Approximate weight	6	g	
M Mounting torque ± 10%	2.5	Nm	