

DL253-2000

### Features

- Metal case with ceramic insulator
- High surge current capabilities
- High power cycling capability
- Low on-state and switching losses
- Conform to partial national standard JB/T8949.2-1999

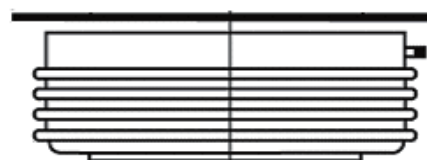
2000A

### Typical Applications

- AC/DC Converters
- DC Power supplies
- Machine tool controls

### Major Ratings and Characteristics

Parameters		DL253-2000	Units
$I_{F(AV)}$		2000	A
	@ $T_{hs}$	105	°C
$I_{F(RMS)}$		3140	A
$I_{FSM}$	@ 50Hz	30	KA
	@ 60Hz	32	KA
$I^2 t$	@ 50Hz	4500	KA <sup>2</sup> s
	@ 60Hz	4270	KA <sup>2</sup> s
$V_{RRM}$	max	2600	V
$T_J$		- 40 to 180	°C



case style

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### ELECTRICAL SPECIFICATIONS

#### Voltage Ratings

Type number	Voltage Code	$V_{RRM}$ , maximum repetitive peak reverse voltage V	$V_{RSM}$ , maximum non-repetitive peak rev. voltage V	$I_{RRM}$ max. @ $T_J = T_{J \text{ max.}}$ mA
DL253-2000	12	1200	1300	100
	16	1600	1700	
	20	2000	2100	
	24	2400	2500	
	26	2600	2700	

#### Forward Conduction

Parameter	DL253-2000	Units	Conditions
$I_{F(AV)}$ Max. average forward current @ Heatsink temperature	2000	A	180° conduction, half sine wave
	105	°C	Double side cooled
$I_{F(RMS)}$ Max. RMS forward current	3140	A	@ 25° C heatsink temperature double side cooled
$I_{FSM}$ Max. peak, one-cycle forward, non-repetitive surge current	30	KA	t = 10ms No voltage reappplied
	32		t = 8.3ms
	25		t = 10ms 100% $V_{RRM}$ reappplied
	27		t = 8.3ms
$I^2 t$ Maximum $I^2 t$ for fusing	4500	KA <sup>2</sup>	t = 10ms No voltage reappplied
	4270		t = 8.3ms
	3150		t = 10ms 100% $V_{RRM}$ reappplied
	3000		t = 8.3ms
$I^2 \sqrt{t}$ Maximum $I^2 \sqrt{t}$ for fusing	45000	KA <sup>2</sup> √s	t = 0.1 to 10ms, no voltage reappplied
$V_{FM}$ Max. forward voltage drop	1.80	V	$I_{pk} = 6280A, T_J = T_{J \text{ max.}}, t_p = 10ms$ sinusoidal wave
$V_{F(TO)}$ Forward threshold voltage	0.96	V	$(16.7\% \times \pi \times I_{F(AV)} < 1 < \pi \times I_{F(AV)})$ , $T_J = T_{J \text{ max}}$
$r_f$ Forward slope resistance	0.175	MΩ	$(1 > \pi \times I_{F(AV)})$ , $T_J = T_{J \text{ max}}$

#### BLOCKING

$V_R$ Forward threshold voltage	$0.6 \times V_{RRM}$	V	$T_J = T_{J \text{ max}}$
$P_{RSM}$ Surge reverse power dissipation	16	KW	$T_{jm} = 160^\circ C; t_i = 100 \mu s$

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### Thermal and Mechanical Specification

Parameter	DL253-2000	Units	Conditions
T <sub>J</sub> Max.junction operating temperature range	-40 to 180	°C	
T <sub>stg</sub> Max. storage temperature range	-55 to 200		
R <sub>thj-hs</sub> Max. thermal resistance, junction to heatsink	0.050 0.025	K/W	DC operation single(double) side cooled
F Mounting torque, ± 10%	26	KN	
wt Approximate weight	500	g	

### Dimensions in MM

