



# DPF SERIES 52MM

1500 - 2400 V<sub>RRM</sub>, 925 A<sub>AVG</sub>

Fast Recovery Diode

## Features:

- All Diffused Structure
- Fast Switching Performance
- Blocking capability up to 2400 volts
- Soft Reverse Recovery
- Rugged Ceramic Hermetic Package
- Pressure Assembled Device



## ELECTRICAL CHARACTERISTICS AND RATINGS

### Reverse Blocking

Device Type	V <sub>RRM</sub> <sup>(1)</sup>	V <sub>RSM</sub> <sup>(1)</sup>
D52P925F1500	1500	1600
D52P925F1600	1600	1700
D52P925F1800	1800	1900
D52P925F2000	2000	2100
D52P925F2200	2200	2300
D52P925F2400	2400	2500

V<sub>RRM</sub> = Repetitive peak reverse voltage

V<sub>RSM</sub> = Non repetitive peak reverse voltage<sup>(2)</sup>

Repetitive peak reverse leakage	I <sub>RRM</sub>	10 mA 75 mA <sup>(3)</sup>
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### Notes:

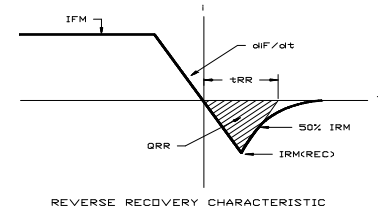
All ratings are specified for T<sub>J</sub>=25°C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +150°C.

(2) 10 msec. max. pulse width

(3) Maximum value for T<sub>J</sub> = 150°C.

(4) See parameter definition below :



REVERSE RECOVERY CHARACTERISTIC

### Conducting - On State

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state	I <sub>F(AV)</sub>		925		A	Sinewave, 180° conduction, T <sub>C</sub> = 70°C
RMS value of on-state current	I <sub>FRMS</sub>		1450		A	Nominal value
Peak one cycle surge (non-repetitive) current	I <sub>FSM</sub>		18000		A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, T <sub>J</sub> = 150°C
			16000		A	10.0 msec (50Hz), sinusoidal wave-
I square t	I <sup>2</sup> t		1.3x10 <sup>6</sup>		A <sup>2</sup> s	8.3 msec and 10 msec
Peak on-state voltage	V <sub>FM</sub>		2.65		V	I <sub>FM</sub> = 2900 A; Duty cycle ≤ 0.01%; T <sub>J</sub> Max
Reverse Recovery Current <sup>(4)</sup>	I <sub>RM(REC)</sub>		45		A	I <sub>FM</sub> = 1000 A; dI <sub>F</sub> /dt = 10 A/μs; T <sub>J</sub> Max
Reverse Recovery Charge <sup>(4)</sup>	Q <sub>rr</sub>		200		μC	I <sub>FM</sub> = 1000 A; dI <sub>F</sub> /dt = 10 A/μs; T <sub>J</sub> Max
Reverse Recovery Time <sup>(4)</sup>	t <sub>RR</sub>		*		μs	

\* For guaranteed maximum values, contact factory



**THERMAL AND MECHANICAL CHARACTERISTICS AND RATINGS**

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T <sub>J</sub>	-40	+150		°C	
Storage temperature	T <sub>STG</sub>	-40	+150		°C	
Thermal resistance – Junction to Case	R <sub>Θ(j-c)</sub>		0.023 0.046		°C/W	Double sided cooled Single sided cooled
Thermal resistance – Case to Sink	R <sub>Θ(c-s)</sub>		.010 .020		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	5000 22.3	6000 26.7		lb. kN	
Weight	W			16 460	oz. g	

\* Mounting surfaces smooth, flat and greased

**CASE OUTLINE AND DIMENSIONS**



STRIKE DISTANCE = 0.73 INCH  
CREEPAGE DISTANCE = 1.17 INCH

