

**P S T  
Rectifier**

**D3501N - Standard**

**3200-4200 V<sub>RRM</sub>; 3500 A avg**

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**GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER**

**Features:**

- . All Diffused Structure
- . High Surge rating
- . Blocking capability up to 3200 volts
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

**ELECTRICAL CHARACTERISTICS AND RATINGS**

**Reverse Blocking**

Device Type	V <sub>RRM</sub> (1)	V <sub>RSM</sub> (1)
D3501N32T	3200	3300
D3501N34T	3400	3500
D3501N36T	3600	3700
D3501N38T	3800	3900
D3501N40T	4000	4100
D3501N42T	4200	4300

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

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

Repetitive peak reverse leakage	I <sub>RRM</sub>	15 mA 100 mA (3)
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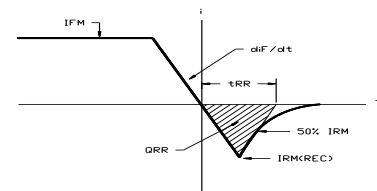
Notes:

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

(1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range 0 to +160 °C.

(2) 10 msec. max. pulse width

(3) Maximum value for T<sub>j</sub> = 160 °C.



REVERSE RECOVERY CHARACTERISTIC

**Conducting - on state**

Parameter	Symbol	Min.	Max.	Typ	Units	Conditions
Average value of on-state current	I <sub>F(AV)</sub>		3600		A	Sinewave, 180° conduction, T <sub>c</sub> = 100°C
RMS value of on-state current	I <sub>FRMS</sub>		8300		A	Nominal value
Peak one cycle surge (non repetitive) current	I <sub>FSM</sub>		56000		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 160 °C
I square t	I <sup>2</sup> t		15.68x10 <sup>6</sup>		A <sup>2</sup> s	10 msec
Peak on-state voltage	V <sub>FM</sub>		1.27		V	I <sub>FM</sub> = 4000 A; Duty cycle ≤ 0.01%; T <sub>j</sub> = 160 °C
Reverse Recovery Current (4)	I <sub>RM(REC)</sub>		200		A	I <sub>FM</sub> = 1000 A; dI <sub>F</sub> /dt = 10 A/μs, T <sub>j</sub> = 160 oC
Reverse Recovery Charge (4)	Q <sub>rr</sub>		7200*		μC	
Reverse Recovery Time (4)	t <sub>RR</sub>		*		μs	

\* For guaranteed maximum values, contact factory

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	$T_j$	-40	+160		°C	
Storage temperature	$T_{stg}$	-40	+160		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.0096		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to sink	$R_{\theta(c-s)}$		0.0025		°C/W	Double sided cooled *
Mounting force	P	36	52		kN	
Weight	W			1.7	Kg	

- Mounting surfaces smooth, flat and greased

**D3501N**  
Maßbild / Outline

