



DPS SERIES 77MM

1800 – 2600 V_{RRM} , 4400 A_{AVG}
Standard Recovery Diode

Features:

- All Diffused Structure
- High Surge rating
- Blocking capability up to 2600 volts
- Soft Reverse Recovery
- Rugged Ceramic Hermetic Package
- Pressure Assembled Device



ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	$V_{RRM}^{(1)}$	$V_{RSM}^{(1)}$
D77P4400S1800	1800	1900
D77P4400S2000	2000	2100
D77P4400S2200	2200	2300
D77P4400S2400	2400	2500
D77P4400S2500	2500	2600
D77P4400S2600	2600	2700

V_{RRM} = Repetitive peak reverse voltage

V_{RSM} = Non repetitive peak reverse voltage⁽²⁾

Repetitive peak reverse leakage	I_{RRM}	15 mA 100 mA ⁽³⁾
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Notes:

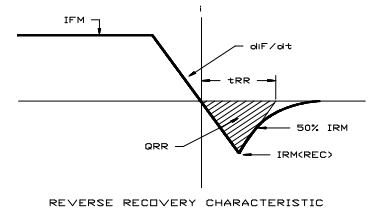
All ratings are specified for $T_J=25^\circ\text{C}$ unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range 0 to +185°C.

(2) 10 msec. max. pulse width

(3) Maximum value for $T_J = 185^\circ\text{C}$.

(4) See parameter definition below:



Conducting - On State

Parameter	Symbol	Min.	Max.	Typ	Units	Conditions
Average value of on-state current	$I_{F(AV)}$		4400		A	Sinewave, 180° conduction, $T_C = 100^\circ\text{C}$
RMS value of on-state current	I_{FRMS}		6900		A	Nominal value
Peak one cycle surge (non-repetitive) current	I_{FSM}		60000		A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, $T_J = 160^\circ\text{C}$
			55000		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, $T_J = 160^\circ\text{C}$
I square t	I^2t		14.9×10^6		A^2s	8.3 msec and 10 msec
Peak on-state voltage	V_{FM}		0.865		V	$I_{FM} = 2000 \text{ A}$; Duty cycle $\leq 0.01\%$; $T_J = 160^\circ\text{C}$
Reverse Recovery Current ⁽⁴⁾	$I_{RM(REC)}$		290		A	$I_{FM} = 1000 \text{ A}$; $dI_F/dt = 10 \text{ A}/\mu\text{s}$, $T_J = 160^\circ\text{C}$
Reverse Recovery Charge ⁽⁴⁾	Q_{rr}		*		μC	
Reverse Recovery Time ⁽⁴⁾	t_{RR}		*		μs	

* For guaranteed maximum values contact factory



THERMAL AND MECHANICAL CHARACTERISTICS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T _J	-40	+185		°C	
Storage temperature	T _{STG}	-40	+185		°C	
Thermal resistance – Junction to Case	R _{θ(J-C)}		0.012 0.024		°C/W	Double sided cooled Single sided cooled
Thermal resistance – Case to Sink	R _{θ(C-S)}		.002 .004		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	7000 31.1	9000 40.0		lb. kN	
Weight	W			3.5 1.6	lbs Kg	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



STRIKE DISTANCE = 1.04 INCH
CREEPAGE DISTANCE = 1.64 INCH

