



DPS SERIES 38MM

1500 – 2600 V_{RRM}, 1500 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⁾
D38P1500S1500	1500	1600
D38P1500S1600	1600	1700
D38P1500S1800	1800	1900
D38P1500S2000	2000	2100
D38P1500S2200	2200	2300
D38P1500S2400	2400	2500
D38P1500S2600	2600	2700

V_{RRM} = Repetitive peak reverse voltage

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

Repetitive peak reverse leakage	I _{RRM}	20 mA 70 mA ⁽³⁾
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Notes:

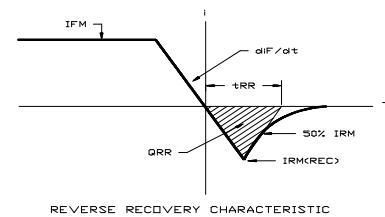
All ratings are specified for T_J=25°C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +185°C.

(2) 10 msec. max. pulse width

(3) Maximum value for T_J = 185°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)}		1500		A	Sinewave, 180° conduction, T _C = 90°C
RMS value of on-state current	I _{FRMS}		2350		A	Nominal value
Peak one cycle surge (non-repetitive) current	I _{FSM}		16000		A	8.3 msec (60Hz), sinusoidal wave-shape, 180° conduction, T _J = 185°C
			14500		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _J = 185°C
I square t	I ² t		1.06x10 ⁶		A ² s	8.3 msec and 10.0 msec
Peak on-state voltage	V _{FM}		1.65		V	I _{FM} = 4700 A; T _J = 160°C
Reverse Recovery Current ⁽⁴⁾	I _{RM(REC)}		*	160	A	I _{FM} = 1000 A; di _F /dt = 10 A/μs; 125°C
Reverse Recovery Charge ⁽⁴⁾	Q _{RT}		*		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)}		0.040 0.080		°C/W	Double sided cooled Single sided cooled
Thermal resistance – Case to Sink	R _{Θ(C-S)}		.015 .030		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	3500 15.5	4500 19.9		lb. kN	
Weight	W			9 225	oz. g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSIONS



STRIKE DISTANCE = 0.73 INCH
CREEPAGE DISTANCE = 1.17 INCH

