

Standard Rectifier

1000 VRRM;

GENERAL PURPOSE HIGH POWER STANDARD RECTIFIER

Features:

- . All Diffused Structure
- . High Surge rating
- . Blocking capability up to 1000 volts
- . Soft Reverse Recovery
- . Rugged Ceramic Hermetic Package
- . Pressure Assembled Device

ELECTRICAL CHARACTERISTICS AND RATINGS

Reverse Blocking

Device Type	VRRM (1)	VRSM (1)
AR3001LTS	1000	1100

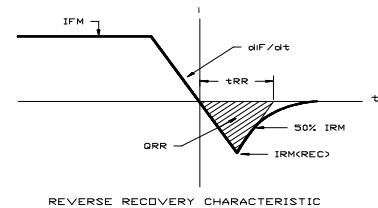
VRRM = Repetitive peak reverse voltage
 VRSM = Non repetitive peak reverse voltage (2)

Notes:

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

- (1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range -40 to +190 °C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for Tj = 190 °C.
- (4) See parameter definition below :

Repetitive peak reverse leakage	IRR	75 mA (3)
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Conducting - on state

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	IF(AV)		6460		A	Sinewave, 180° conduction, Tc =85°C
Peak one cycle surge (non repetitive) current	IFSM		504000		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, Tj = 190 °C
I square t	I²t		12700000		A²s	10.0 msec
Peak on-state voltage	VFM		1.20		V	IFM = 4500 A; Duty cycle ≤ 0.01% Tj = 25 °C
Reverse Recovery Current (4)	IRM(REC)		*		A	IFM = 1000 A; diF/dt = 10 A/μs
Reverse Recovery Charge (4)	Qrr		*		μC	
Reverse Recovery Time (4)	tRR		*		μs	

* For guaranteed maximum values, contact factory

THERMAL AND MECHANICAL CHARACTERISTICS

AR3001LT - Standard Rectifier

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T_j	-40	+190		°C	
Storage temperature	T_{stg}	-40	+190		°C	
Thermal resistance - junction to case	$R_{\theta(j-c)}$		0.023 0.046		°C/W	Double sided cooled Single sided cooled
Thermal resistance - case to sink	$R_{\theta(j-c)}$		0.010 0.020		°C/W	Double sided cooled * Single sided cooled *
Mounting force	P	5500 24.5	6000 26.7		lb. kN	
Weight	W			200	g	

* Mounting surfaces smooth, flat and greased

CASE OUTLINE AND DIMENSION

