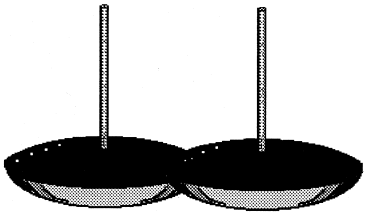
Semiconductor

Data Sheet

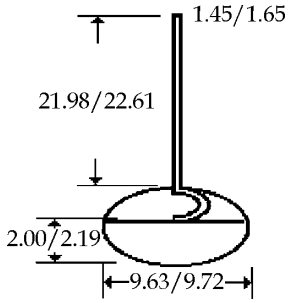
20 & 30 Amp AUTOMOTIVE DISH RECTIFIERS

FDR20/3001 . . . 20/3004 Series

Description



Mechanical Dimensions



(Dimensions in mm)

Features

- **LOW COST**
- **HIGH SURGE CAPABILITY**
- **DIFFUSED JUNCTION**
- **LOW LEAKAGE CURRENT**
- **HIGH TEMPERATURE CAPABILITY**
- **MEETS UL SPECIFICATION 94V-0**

		FDR20/3001 . . . 20/3004 Series				Units
Maximum Ratings		**FDR20/3001**	**FDR20/3002**	**FDR20/3003**	**FDR20/3004**	
Peak Repetitive Reverse Voltage...V_{RRM}		100	200	300	400	Volts
RMS Reverse Voltage...$V_{R(rms)}$		70	140	210	280	Volts
DC Blocking Voltage...V_{DC}		100	200	300	400	Volts
Average Forward Rectified Current...$I_{F(av)}$ T_A = 55°C *(Note 3)*		25/35				Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} @ Rated Current & Temp		400/500				Amps
Operating & Storage Temperature Range...T_J, T_{STRG}		-65 to 175				°C
Electrical Characteristics						
Maximum Forward Voltage @ 80A...V_F		1.15				Volts
Maximum DC Reverse Current...I_R	25°C	2.0				µAmps
@ Rated DC Blocking Voltage	150°C	250				µAmps
Typical Junction Capacitance...C_J *(Note 1)*		< 200 >		< 300 >		pF
Typical Thermal Resistance...$R_{\theta JA}$ *(Note 2)*		0.8				°C/W
Typical Reverse Recovery Time...t_{RR}		3.0				µs

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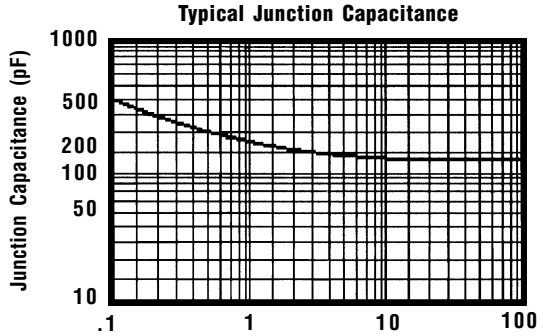
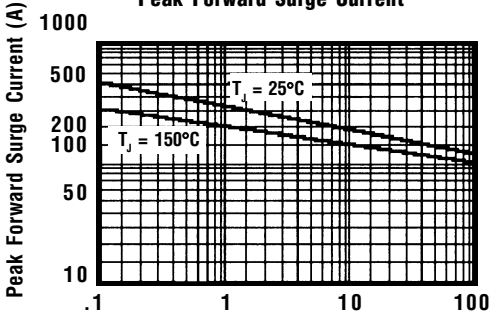
Typical Junction Capacitance

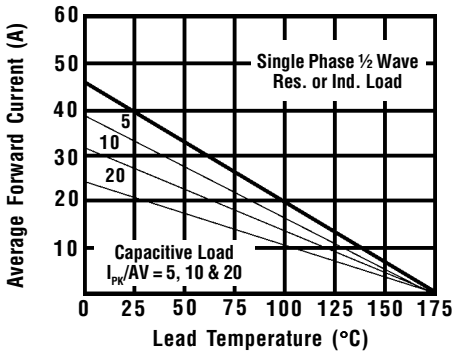


T_J = 25°C F = 1 MHz V_{SIG} = 50 Vpp

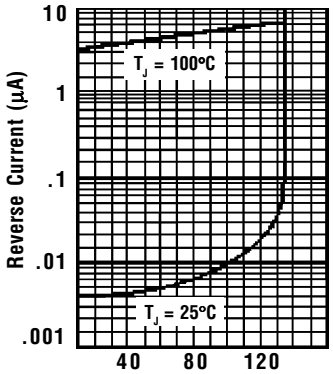
Non-Repetitive Peak Forward Surge Current



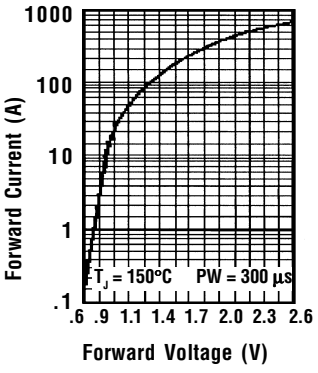
Forward Current Derating Curve



Typical Reverse Characteristics



Typical Instantaneous Forward Characteristics



Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 Hz Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

NOTES: 1. Measured @ 1 MHz and applied reverse voltage of 4.0V.
2. Thermal Resistance Junction to Ambient, Jedec Method.
3. When Mounted to heat sink, from body.