Pb Free Plating Product

S20D35A thru S20D200A

20.0 Amperes Heat Sink Dual Common Anode Schottky Half Bridge Rectifiers

Features

- ✶ Standard MBR matured technology with high reliablity
- ✶ Low forward voltage drop
- ✶ High current capability
- ✶ Low reverse leakage current
- ✶ High surge current capability

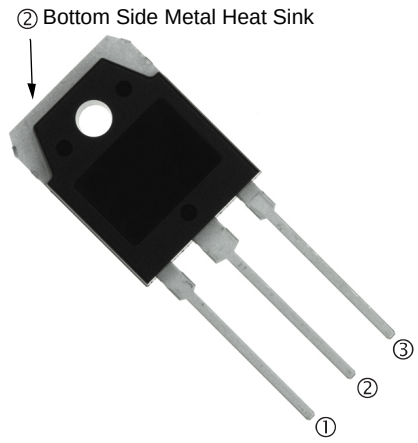
Application

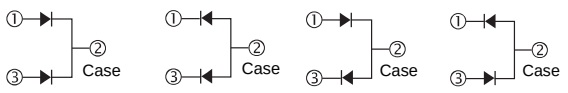
- ✶ Automotive Inverters/Solar Inverters
- ✶ Plating Power Supply,SMPS and UPS
- ✶ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ✶ Case: Heatsink TO-3PN/TO-3PB
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-202 method 208
- ✶ Polarity: As marked on diode body
- ✶ Mounting position: Any
- ✶ Weight: 6.5 gram approximately

TO-3PN/TO-3PB





Positive Common Cathode Suffix "C" | Negative Common Anode Suffix "A" | Doubler Tandem Polarity Suffix "D" | Series Tandem Polarity Suffix "S"

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	S20D 35A	S20D 45A	S20D 50A	S20D 60A	S20D 90A	S20D 100A	S20D 150A	S20D 200A	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS voltage	V_{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC blocking voltage	V_{DC}	35	45	50	60	90	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	20								A
Peak repetitive forward current (Rated V_R, Square wave, 20KHz)	I_{FRM}	20								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	150								A
Peak repetitive reverse surge Current (Note 1)	I_{RRM}	1.0		0.5						A
Maximum instantaneous forward voltage (Note 2) I_F=10A, T_J=25℃ I_F=10A, T_J=125℃ I_F=20A, T_J=25℃ I_F=20A, T_J=125℃	V_F	 - 0.57 0.84 0.72		 0.80 0.70 0.95 0.85		 0.85 0.75 0.95 0.85		 0.95 0.92 1.02 0.98		V
Maximum reverse current @ rated VR T_J=25 ℃	I_R	0.1								mA
T_J=125 ℃		15		10		5				
Voltage rate of change,(Rated V_R)	dV/dt	10,000								V/μs
Typical thermal resistance	$R_{\theta JC}$	1								℃/W
Operating junction temperature range	T_J	- 55 to +150								℃
Storage temperature range	T_{STG}	- 55 to +150								℃

Note 1: 2.0μs Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300μs Pulse Width, 1% Duty Cycle

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RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- FORWARD CURRENT DERATING CURVE

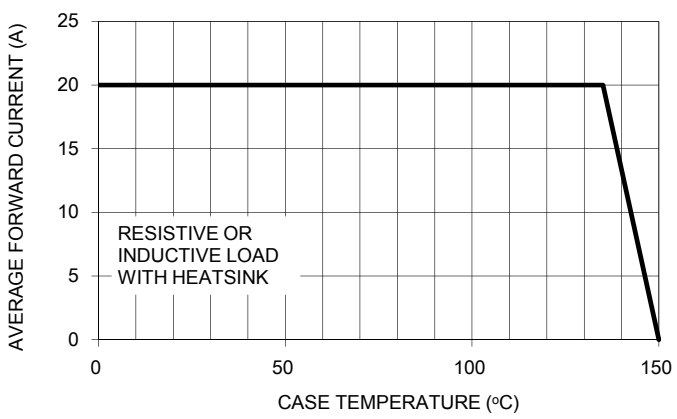


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

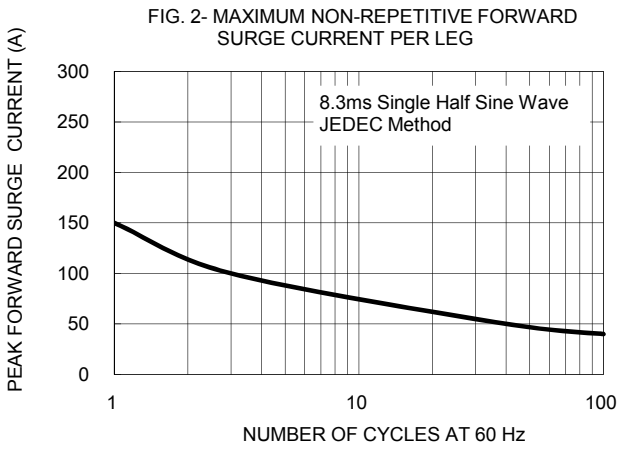


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

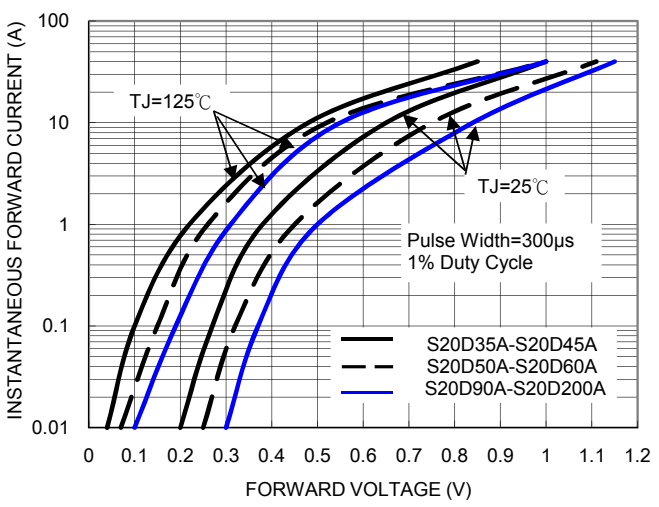


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

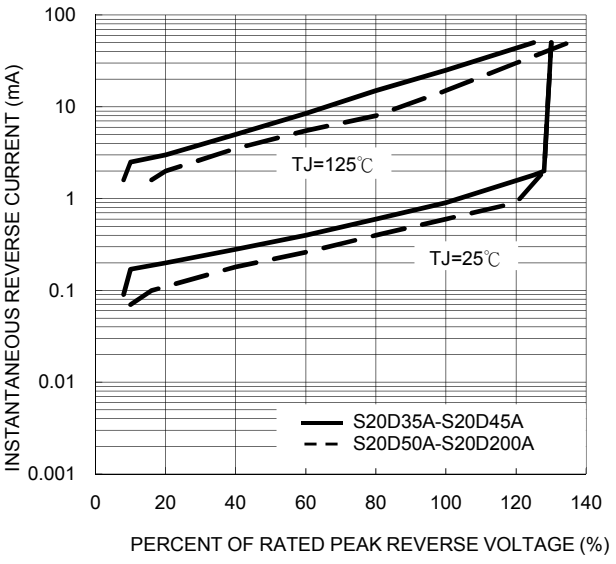


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

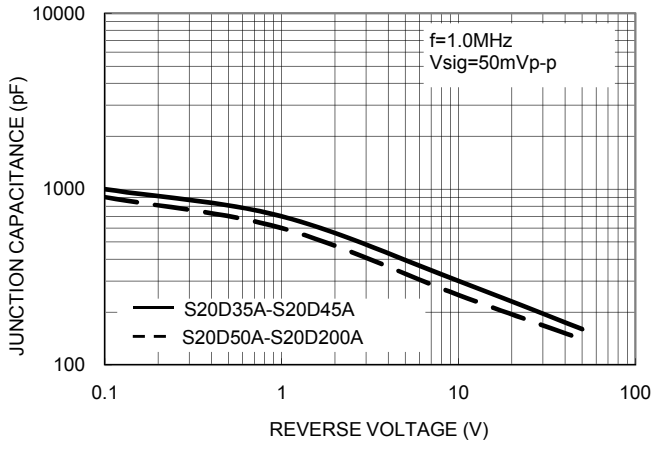
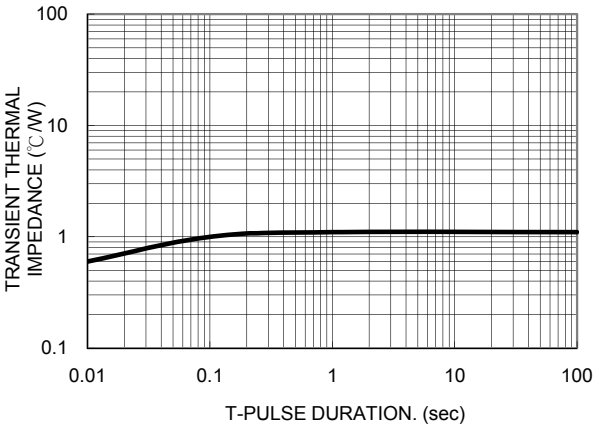


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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