

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 reliability
- ★ 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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C 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°C	V _F	-		0.80		0.85		0.95		V	
I _F =10A, T _J =125°C		0.57		0.70		0.75		0.92			
I _F =20A, T _J =25°C		0.84		0.95		0.95		1.02			
I _F =20A, T _J =125°C		0.72		0.85		0.85		0.98			
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	0.1								mA	
		15		10		5					
Voltage rate of change,(Rated V _R)	dV/dt	10,000								V/μs	
Typical thermal resistance	R _{θJC}	1								°C/W	
Operating junction temperature range	T _J	- 55 to +150								°C	
Storage temperature range	T _{STG}	- 55 to +150								°C	

Note 1: 2.0μs Pulse Width, f=1.0KHz
 Note 2: Pulse Test : 300μs Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

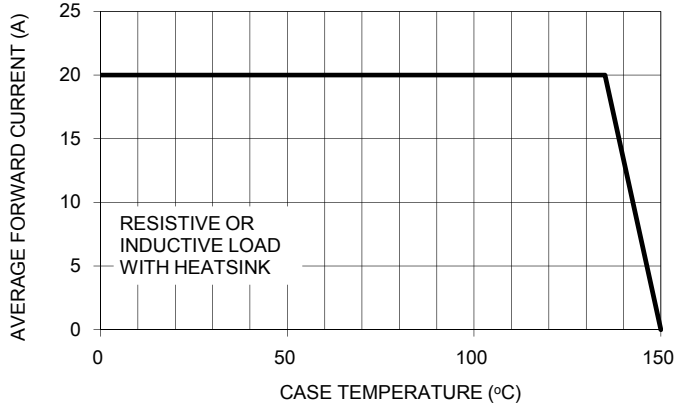


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

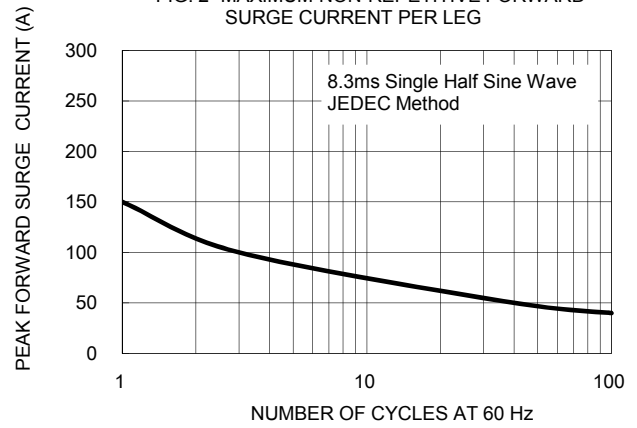


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

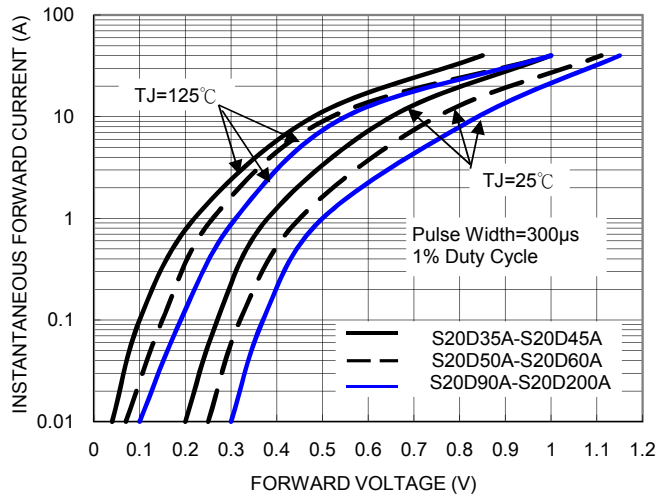


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

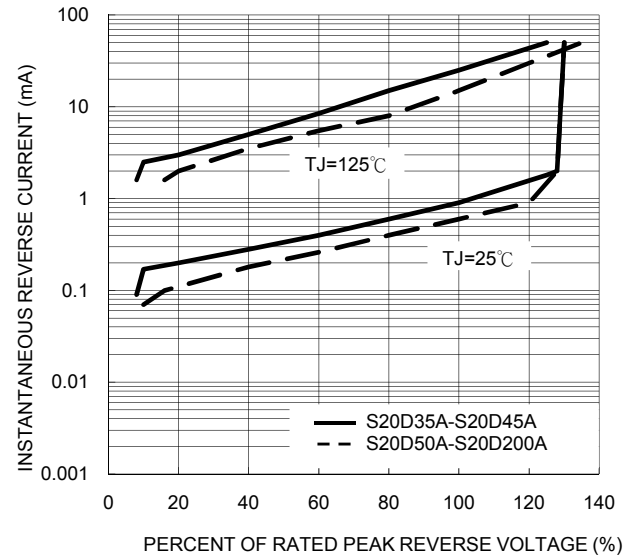


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

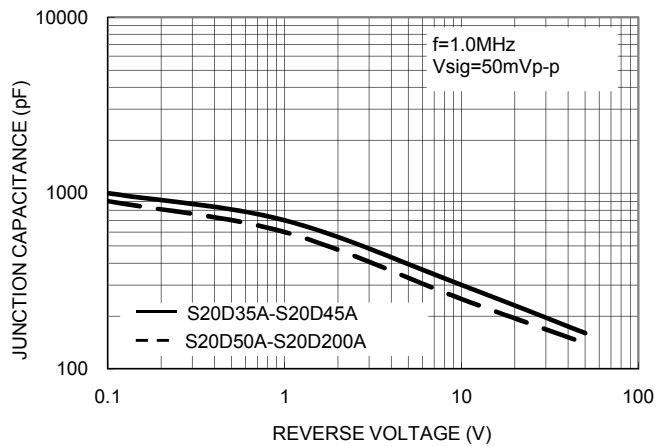


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

