

Pb Free Plating Product

S30D35A thru S30D200A



30.0 Amperes Heat Sink Dual Common Anode Schottky Half Bridge Rectifiers

Features

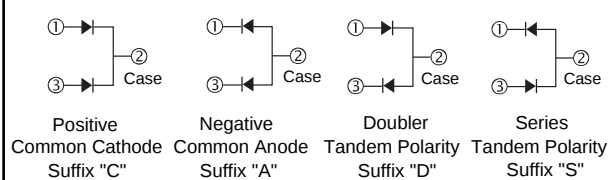
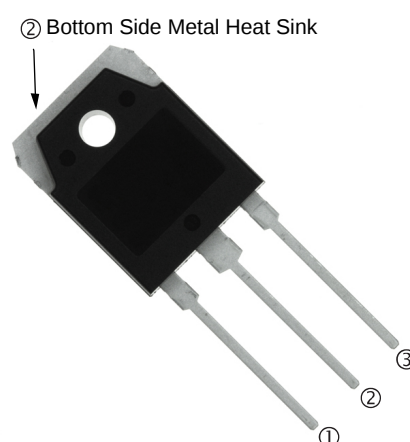
- ★ Standard MBR matured technology with high reliability
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

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** ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	S30D 35A	S30D 45A	S30D 50A	S30D 60A	S30D 90A	S30D 100A	S30D 150A	S30D 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)}	30								A
Peak repetitive forward current (Rated V _R , Square wave, 20KHz)	I _{FRM}	30								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	200								A
Peak repetitive reverse surge Current (Note 1)	I _R	2		1						A
Maximum instantaneous forward voltage (Note 2) I _F =15A, T _J =25℃ I _F =15A, T _J =125℃ I _F =30A, T _J =25℃ I _F =30A, T _J =125℃	V _F	-		0.75		0.85		0.95	1.05	V
		0.60		0.65		0.75		0.92	-	
		0.82		-		-		1.02	1.10	
		0.73		-		-		0.98	-	
Maximum reverse current @ rated VR T _J =25 ℃ T _J =125 ℃	I _R	1				0.5			0.1	mA
		20		15		10				
Voltage rate of change,(Rated V _R)	dV/dt	10,000								V/μs
Typical thermal resistance	R _{θJC}	1.4								℃/W
Operating junction temperature range	T _J	- 55 to +150								℃
Storage temperature range	T _{STG}	- 55 to +150								℃

Note 1: 2.0 μs Pulse Width, $f=1.0\text{KHz}$ Note 2: Pulse Test : 300 μs Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

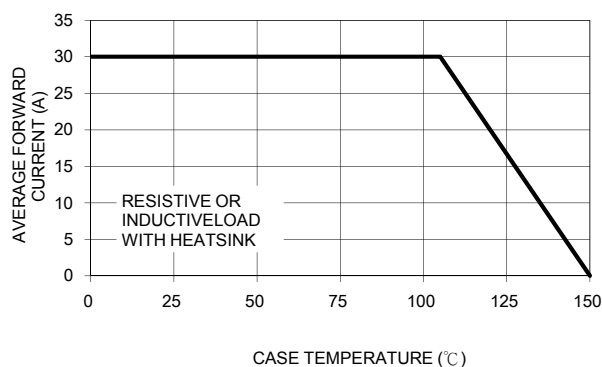


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

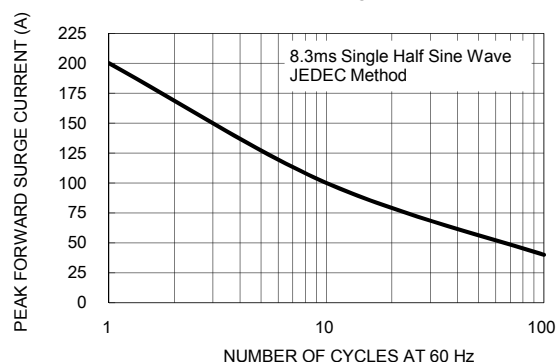


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

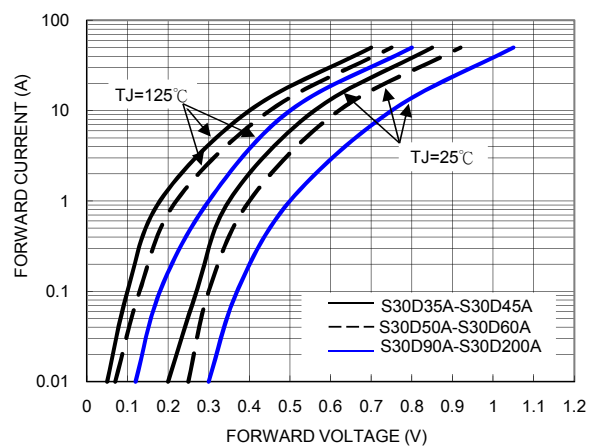


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

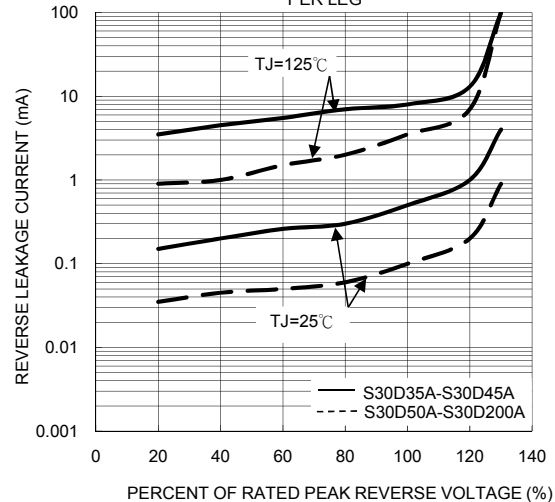


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

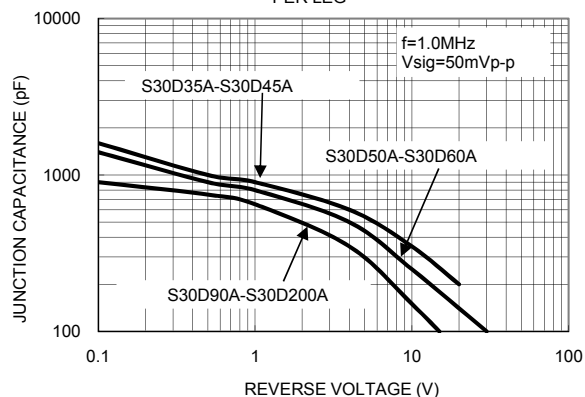


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

