

Pb Free Plating Product

S60D35C thru S60D100C



60.0 Ampere Heatsink Type Dual Common Cathode Schottky Barrier Rectifiers

<p>Features</p> <ul style="list-style-type: none"> ※ ThinkiSemi latest&matured process schottky ※ Low forward voltage drop ※ High current capability ※ Low reverse leakage current ※ High surge current capability <p>Application</p> <ul style="list-style-type: none"> ※ Automotive Inverters and Solar Inverters ※ Car Audio Amplifiers and Sound Device Systems ※ Plating Power Supply, Motor Control, UPS and SMPS etc. <p>Mechanical Data</p> <ul style="list-style-type: none"> ※ Case: Heatsink open metal TO-3P(TO-3PN/TO-3PB) package ※ 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 	<p>TO-3P(TO-3PN/TO-3PB) Unit:inch(mm)</p> <p>Positive Common Cathode Suffix "S" Negative Common Anode Suffix "A" Doubler Polarity Suffix "D" Series Connection Suffix "S"</p>
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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)								
PARAMETER	SYMBOL	S60D 35C	S60D 45C	S60D 50C	S60D 60C	S60D 90C	S60D 100C	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	90	100	V
Maximum RMS voltage	V _{RMS}	24	31	35	42	63	70	V
Maximum DC blocking voltage	V _{DC}	35	45	50	60	90	100	V
Maximum average forward rectified current	I _{F(AV)}	60						A
Peak repetitive forward current (Rated V _R , Square wave, 20KHz)	I _{FRM}	60						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	420						A
Peak repetitive reverse surge Current (Note 1)	I _R	1						A
Maximum instantaneous forward voltage (Note 2) I _F =30A, T _J =25°C I _F =30A, T _J =125°C I _F =60A, T _J =25°C	V _F	0.70		0.75		0.84		V
		0.60		0.65		-		
		0.82		0.93		0.98		
Maximum reverse current @ rated VR T _J =25°C T _J =125°C	I _R	1						mA
		30		20		10		
Voltage rate of change.(Rated V _R)	dV/dt	10,000						V/μs
Typical thermal resistance	R _{θJC}	0.75						°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

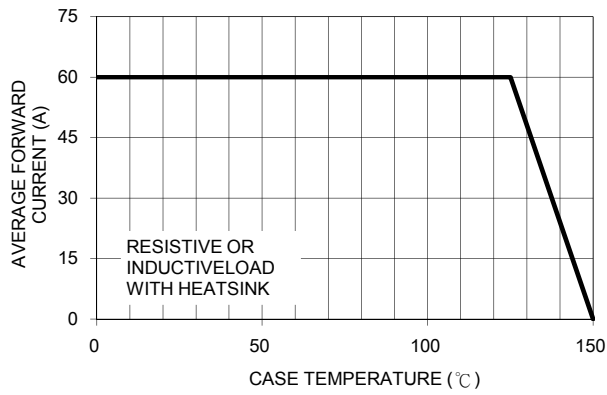


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

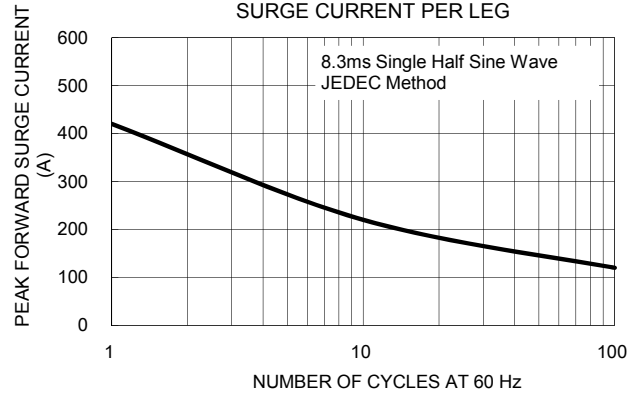


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

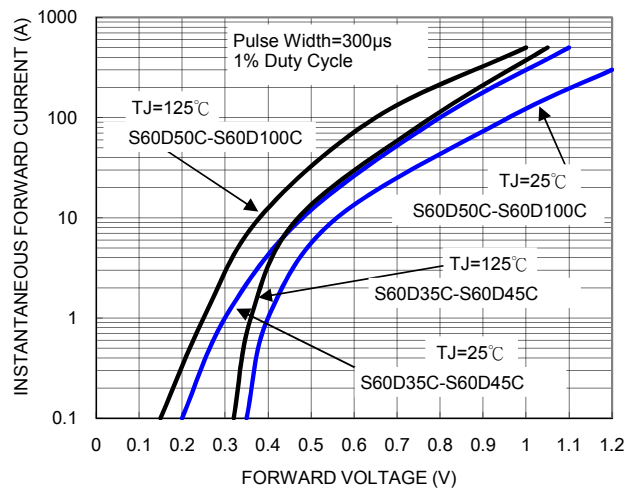


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

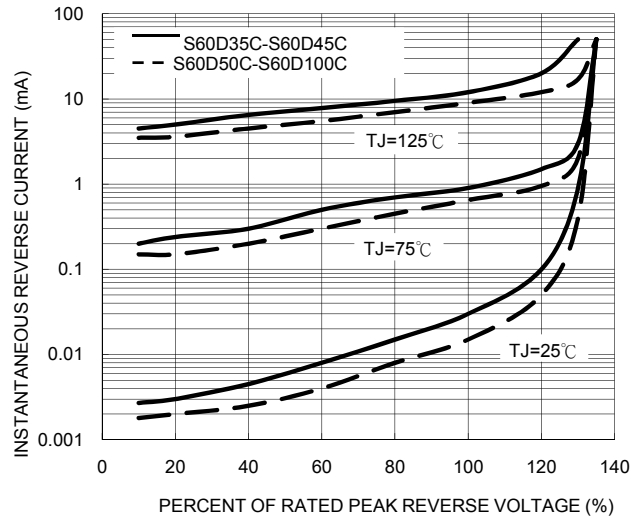


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

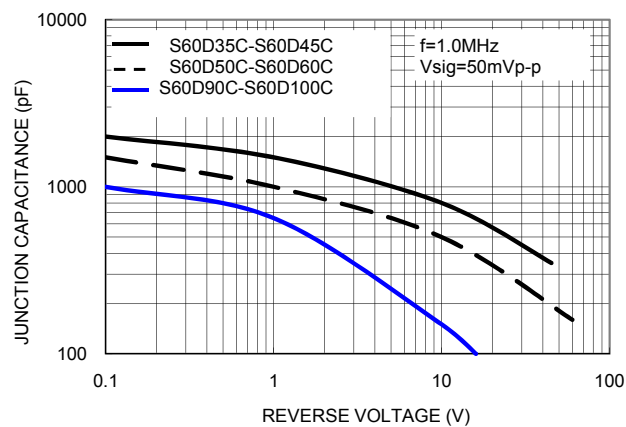


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

