Pb Free Plating Product

STPS61L45CT

60 Ampere,45 Volt Dual Common Cathode Super Schottky Barrier Rectifier

Features

- ThinkiSemi matured super barrier schottky
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

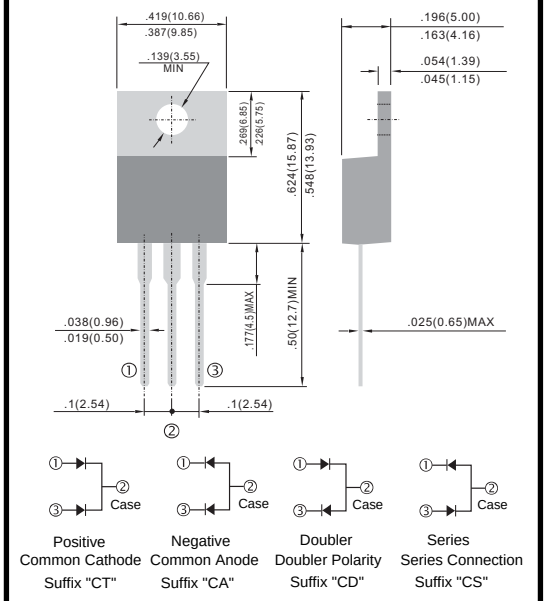
Application

- Inverter/UPS
- Plating Power Supply/SMPS
- Car Audio Amplifier and Sound Device System

Mechanical Data

- Case: Heatsink Open Metal TO-220AB outline
- 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: 2.0 gram approximately

TO-220AB/TO-220-3L Unit : inch (mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)			
PARAMETER	SYMBOL	STPS61L45CT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum RMS voltage	V_{RMS}	32	V
Maximum DC blocking voltage	V_{DC}	45	V
Maximum average forward rectified current	$I_{F(AV)}$	60	A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	250	A
Maximum instantaneous forward voltage (Note 1) I_F = 30A, T_J=25°C I_F = 30A, T_J=125°C I_F = 60A, T_J=25°C I_F = 60A, T_J=125°C	V_F	 0.55 0.53 0.73 0.76	V
Maximum reverse current @ rated V_R T_J=25°C	I_R	0.1	mA
Maximum reverse current @ rated V_R T_J=125°C		40	
Voltage rate of change (Rated V_R)	dV/dt	10000	V/μs
Typical thermal resistance	$R_{\theta JC}$	1.5	°C/W
Operating junction temperature range	T_J	- 55 to +150	°C
Storage temperature range	T_{STG}	- 55 to +175	°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

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RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

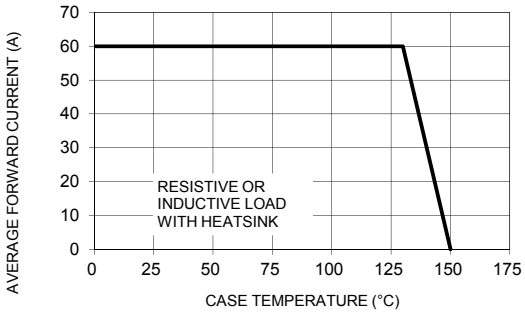


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

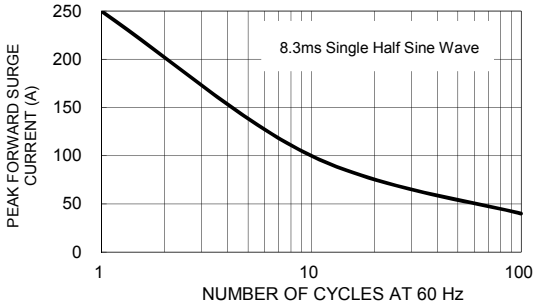


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

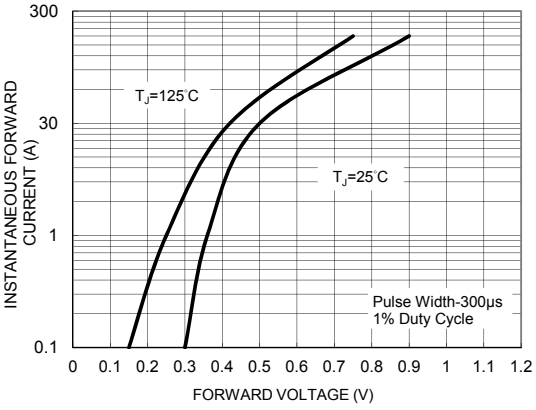


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

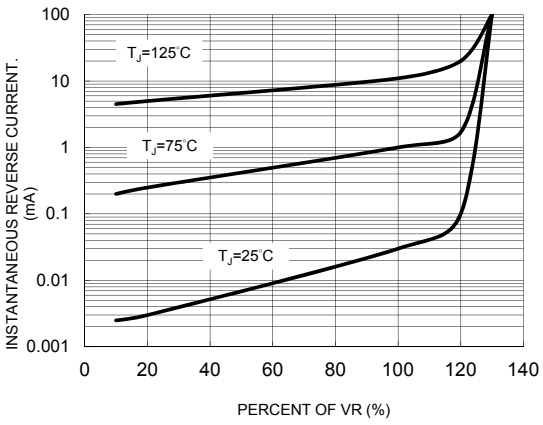


FIG. 5 TYPICAL JUNCTION CAPACITANCE

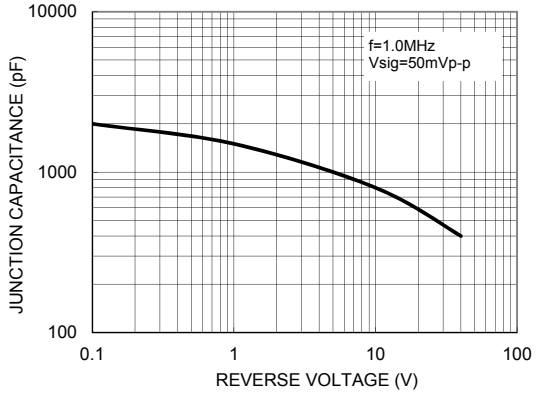
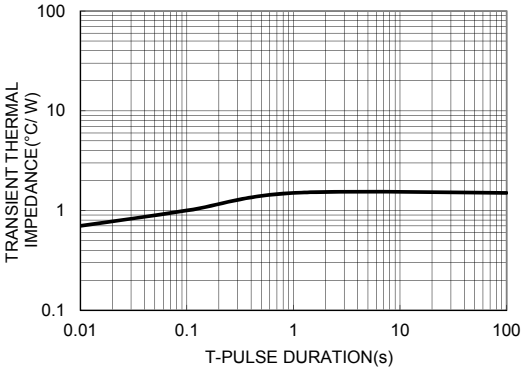


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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