

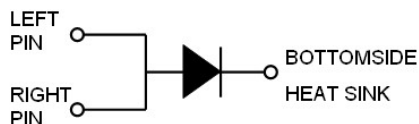
FEATURES

- ✧ High current capability, low forward voltage
- ✧ Excellent high temperature stability
- ✧ Low power loss, and high efficiency
- ✧ High forward surge capability
- ✧ RoHS compliant, and Halogen free

ORDERING INFORMATION

- ✧ Device: SD10U45SL
- ✧ Package: TO-277
- ✧ Marking: 10U45
- ✧ Material: Halogen free
- ✧ Packing: Tape & 13" Reel
- ✧ Quantity per reel: 3,000pcs

PIN CONFIGURATION



MACHANICAL DATA

- ✧ Case: TO-277 small outline plastic package
- ✧ Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ✧ Molding Compound Flammability Rating: UL94-0
- ✧ High temperature soldering guaranteed: 260°C/10second
- ✧ Packed with FRP substrate and epoxy underfilled

APPLICATIONS

- ✧ Switching mode power supply applications
- ✧ Portable equipment battery applications
- ✧ High frequency rectification
- ✧ DC/DC converter
- ✧ Designed as bypass diodes for solar panels

PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{RRM}	Repetitive Peak Reverse Voltage	45	V
$I_{F(AV)}$	Average Forward Current	10	A
I_{FSM}	Peak Forward Surge Current, 8.3ms single half sine-wave	280	A
T_J & T_{STG}	Junction and Storage Temperature	-40~+150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C, unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _F	Forward Voltage (note 1)	I _F = 2A		0.32	0.36	V
		I _F = 8A		0.39	0.42	V
		I _F = 10A		0.45	0.48	V
		I _F = 2A, @100°C		0.23	0.26	V
		I _F = 10A, @100°C		0.36	0.38	V
V _{BR}	Reverse Breakdown Voltage	I _R = 0.5mA	45			V
I _R	Reverse Leakage Current	V _R = 45V			0.3	mA
		V _R = 45V, @100°C			20	mA
R _{th(JA)}	Thermal Resistance (note 2)			31		°C/W

Note 1: Pulse test width PW=300usec, 1% duty cycle

Note 2: Polyimide PCB, 2oz. copper. Cathode pad dimensions 18.8x14.4mm. Anode pad dimensions 5.6x14.4mm

ELECTRICAL CHARACTERISTICS CURVE

FIG.1-FORWARD CURRENT DERATING CURVE

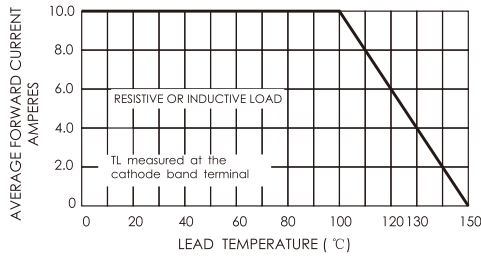


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

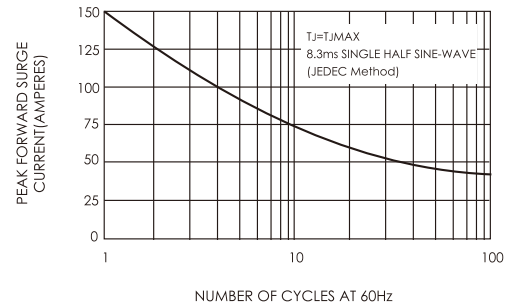


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

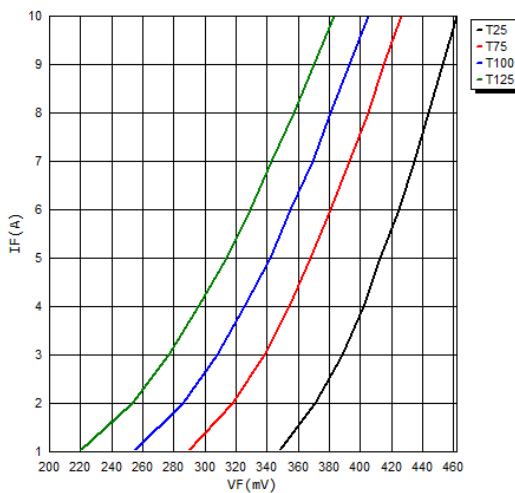


FIG.4-TYPICAL REVERSE CHARACTERISTICS

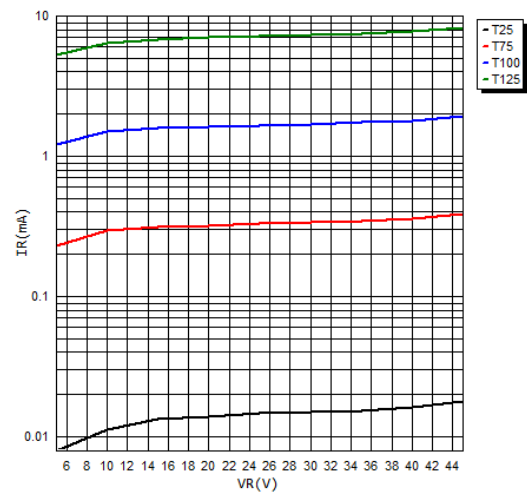
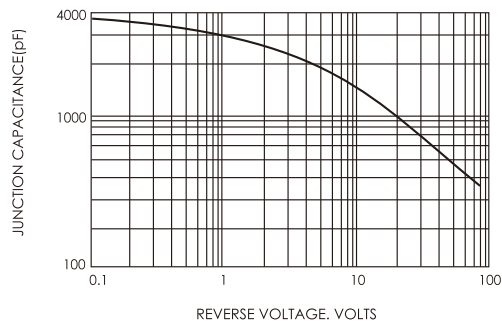
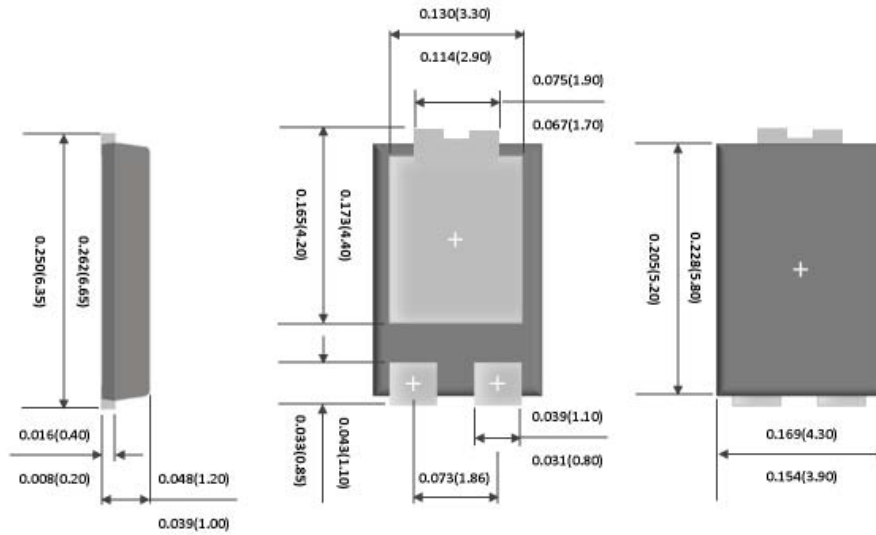


FIG.5-TYPICAL JUNCTION CAPACITANCE

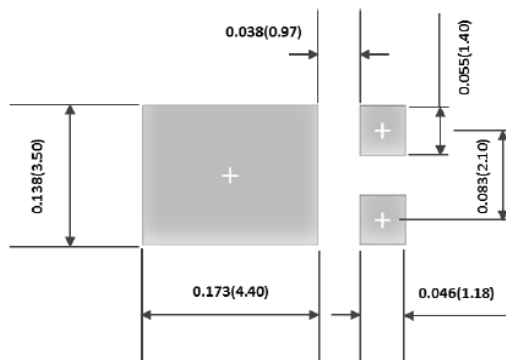


TO-277 PACKAGE OUTLINE DIMENSIONS



unit: mm

FOOT PRINT RECOMMENDATION



unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
SD10U45SL	TO-277	5000/Tape&Reel