

Surface Mount Schottky Barrier Rectifier 45V Current 5A

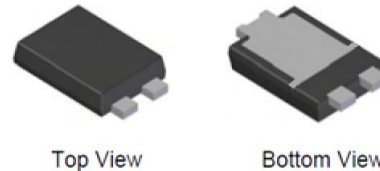
FEATURES AND BENEFITS

- Low power loss, high efficiency operation
- Low forward voltage drop
- Fast switching capability
- High forward surge capability
- Excellent High Temperature Stability

MECHANICAL DATA

- Epoxy : UL94 V-0 rated flame retardant
- Case: TO-277 Package
- Terminals: Matte Tin annealed over copper
- Weight: Approximated 0.129 grams

Primary Characteristic	
I_O	5A
V_{RRM}	45V
I_{FSM}	100A
V_F Typical=2A $T_J=125^\circ\text{C}$	0.28V
T_{Jmax}	125°C



LEFT PIN RIGHT PIN BOTTOMSIDE HEAT SINK

Maximum Ratings (Ta=25°C unless otherwise specified)						
Characteristics			Symbol	Value		Unit
Peak Repetitive Reverse Voltage			V _{RRM}	45		V
Working Peak Reverse Voltage			V _{RWM}	45		V
DC Blocking Voltage			V _{DC}	45		V
RMS Reverse Voltage			V _{RMS}	32		V
Average Forward Rectified Current (per diode)			I _O	5		Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)			I _{FSM}	100		Amps
Electrical Characteristics (Ta=25°C unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop ⁽¹⁾	IF=2A	Ta=25°C	V _F	0.35	0.39	V
	IF=5A	Ta=25°C	V _F	0.47	0.51	V
	IF=2A	Ta=125°C	V _F	0.28	0.32	V
	IF=5A	Ta=125°C	V _F	0.40	0.44	V
Reverse Current ⁽²⁾	VR=45V	Ta=25°C	I _R	80	240	µA
	VR=45V	Ta=125°C	I _R	20	60	mA

Notes (1): Pulse test: 300 μs pulse width, 1% duty cycle,

Notes (2): Pulse width $\leq 40\text{ms}$

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
Characteristics	Symbol	Value	Unit
Typical Thermal Resistance, junction to ambient	$R_{\theta JA}$	105	$^\circ\text{C/W}$
Operating Temperature Range (in DC Mode)	T_J	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

Notes (3): FR-4 PCB, 2oz copper. Minimum recommended pad layout

RATINGS AND CHARACTERISTICS CURVES

Fig 1. Typical Forward Characteristics

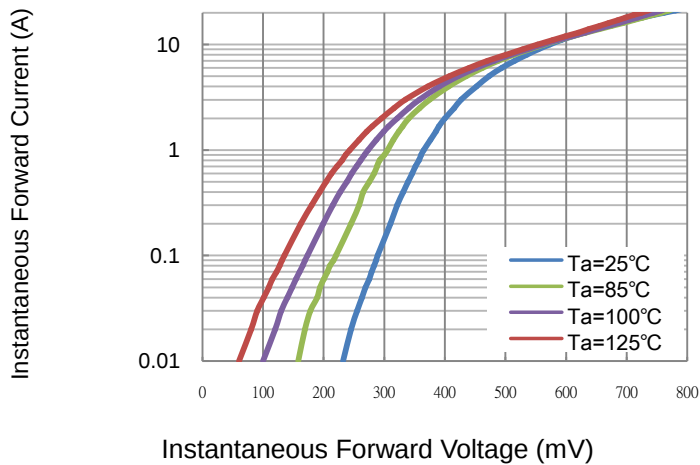


Fig 2. Typical Reverse Characteristics

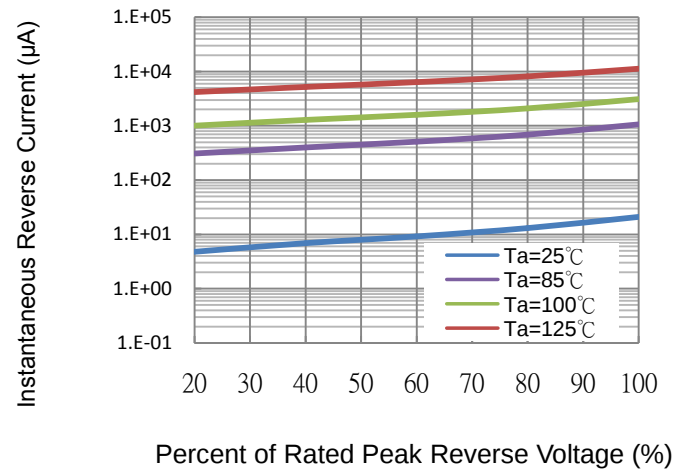


Fig 3. Typical Forward Current Derating Curve

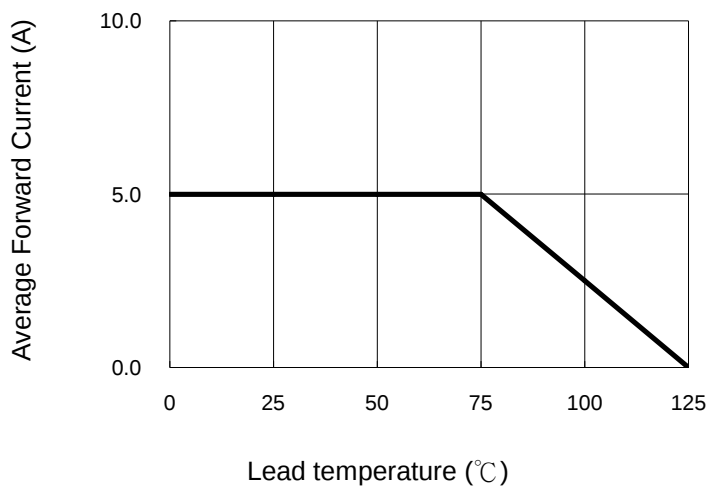
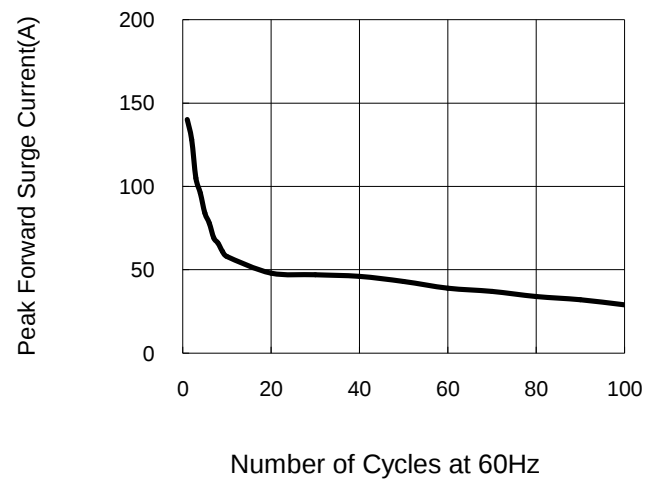
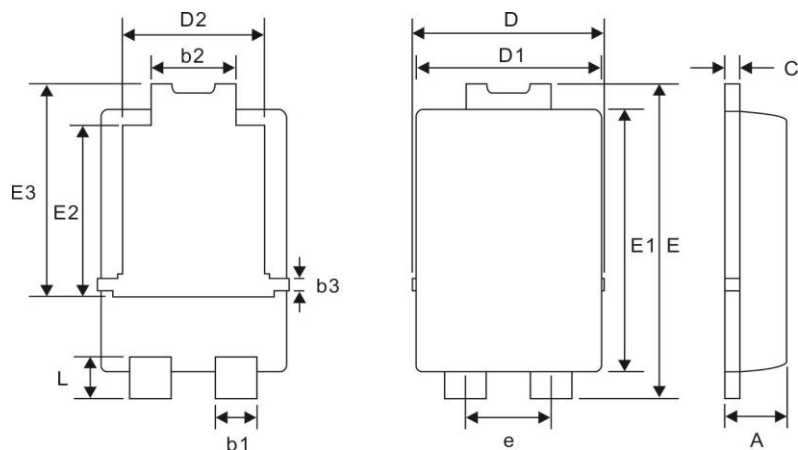


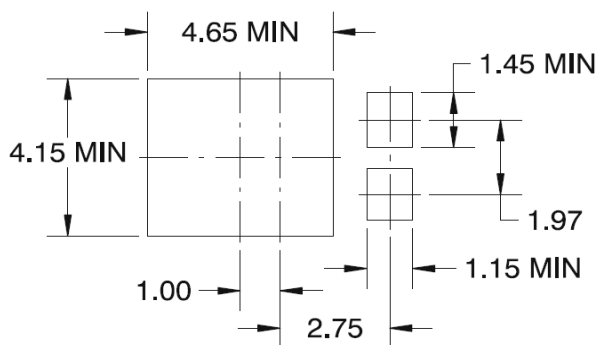
Fig 4. Non-repetitive Forward Surge Current



Package Outline Dimensions (in millimeters)



SYMBOL	DIMENSIONS		
	MIN	NOM	MAX
A	1.05	1.10	1.15
b1	0.80	0.90	0.99
b2	1.70	1.79	1.88
b3	0.15	0.25	0.35
C	0.20	0.25	0.33
D	4.00	4.20	4.30
D1	3.90	3.98	4.05
D2	2.95	3.05	3.15
E	6.40	6.50	6.60
E1	5.30	5.40	5.45
E2	3.45	3.55	3.65
E3	4.20	4.40	4.60
e	1.84 Typ		
L	0.75	0.85	0.95



LAND PATTERN RECOMMENDATION

Marking Information

