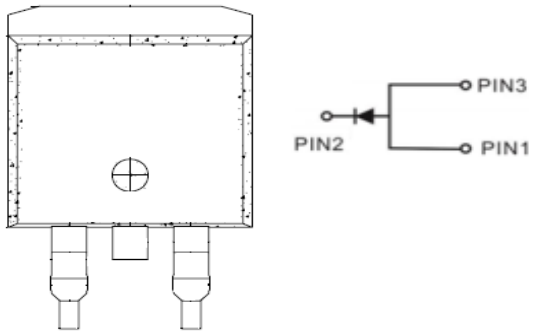
Single Ultra Low VF Schottky Rectifier

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

- Case: TO-263 Package
- Terminals: Matte Tin annealed over copper
- Weight: Approximated 1.38 grams



Primary Characteristic	
I_O	100A
V_{RRM}	100V
I_{FSM}	880A
V_F Typical=5A, T_J=125°C	0.31V
T_{Jmax}	175°C

Maximum Ratings (Ta=25°C unless otherwise specified)			
Characteristics	**Symbol**	**Value**	**Unit**
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}	100	V
DC Blocking Voltage	V_{DC}	100	V
RMS Reverse Voltage	V_{RMS}	70	V
Average Forward Rectified Current (per diode)	I_O	100	Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	880	Amps

Electrical Characteristics (Ta=25°C unless otherwise specified)						
Characteristics			**Symbol**	**Typ.**	**Max.**	**Unit**
Forward Voltage Drop(1)	IF=5A	Ta=25°C	V_F	0.41	0.45	V
	IF=100A	Ta=25°C	V_F	0.90	0.94	V
	IF=5A	Ta=125°C	V_F	0.31	0.35	V
	IF=100A	Ta=125°C	V_F	0.70	0.74	V
Reverse Current(2)	VR=100V	Ta=25°C	I_R	30	90	μA
	VR=100V	Ta=125°C	I_R	15	45	mA
THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)						
Characteristics			**Symbol**	**Value**		**Unit**
Typical Thermal Resistance, junction to case		TO-220AB	$R_{\theta JC}$	2.8		°C/W
Typical Thermal Resistance, junction to case		ITO-220AB	$R_{\theta JC}$	4.0		°C/W
Operating Temperature Range (in DC Mode)			T_J	-65 to +175		°C
Storage Temperature Range			T_{STG}	-65 to +150		°C

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

Notes (2): Pulse width ≦40ms

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

RATINGS AND CHARACTERISTICS CURVES

Fig 1. Typical Forward Characteristics

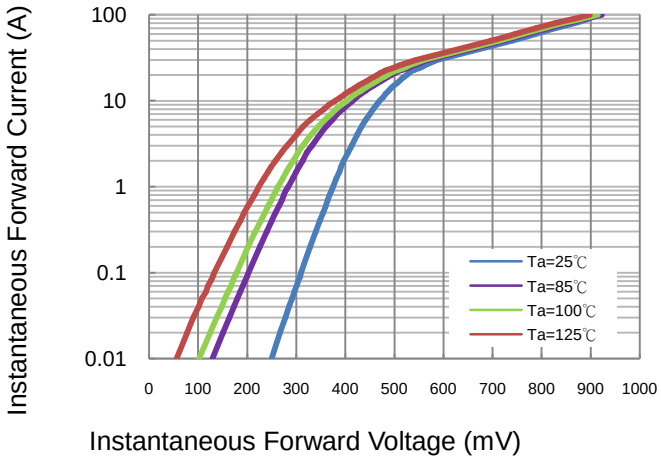


Fig 2. Typical Reverse Characteristics

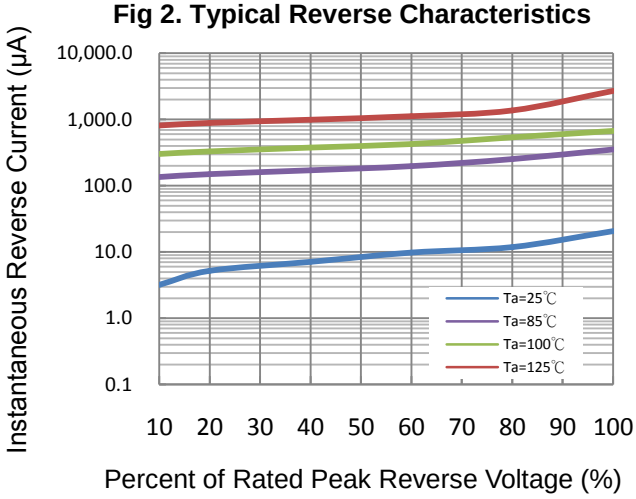


Fig 3. Typical Forward Current Derating Curve

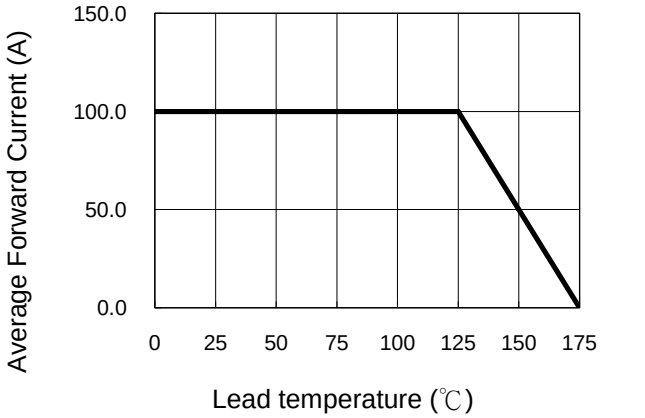
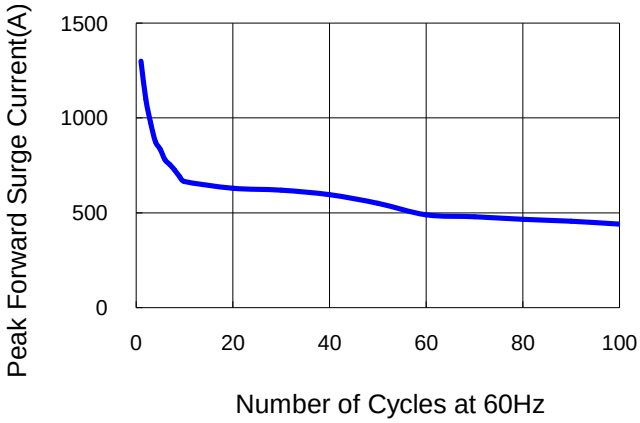
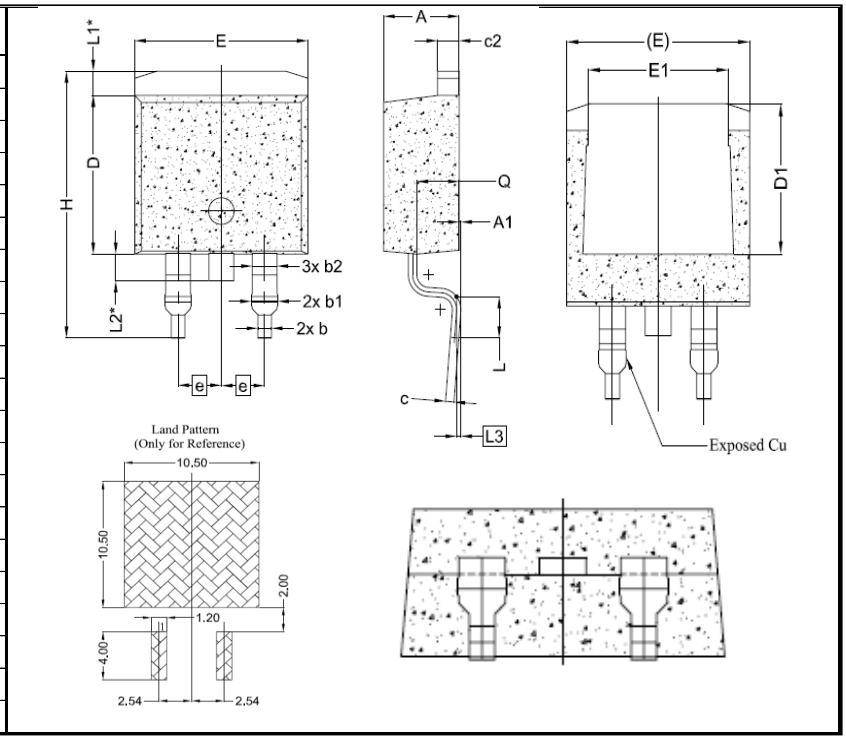


Fig 4. Non-repetitive Forward Surge Current

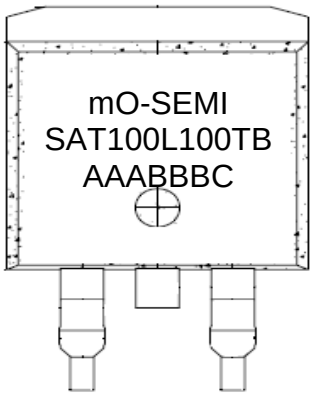


Package Outline Dimensions (in millimeters)

TO-263				
SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	4.24	4.64	0.17	0.18
A1	0.00	0.25	0.00	0.01
b	0.70	0.90	0.03	0.04
b1	1.20	1.75	0.05	0.07
b2	1.20	1.70	0.05	0.07
c	0.40	0.60	0.02	0.02
c2	1.15	1.40	0.05	0.06
D	8.82	9.02	0.35	0.36
D1	6.86	-	0.27	-
E	9.96	10.36	0.39	0.41
E1	6.89	7.89	0.27	0.31
e	2.54BSC			
H	14.61	15.88	0.58	0.63
L	1.78	2.79	0.07	0.11
L1	1.36REF			
L2	1.50REF			
L3	0.25BSC			
Q	2.30	2.70	0.09	0.11



Marking Information



mO-SEMI	=Series Name
SAT100L100	=Part Number Marking Code
AAABBBC	=Product Tracking Code
*TB=TO-263	=Single TO-263