

Single Ultra Low VF Schottky Rectifier

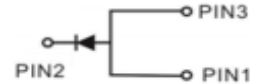
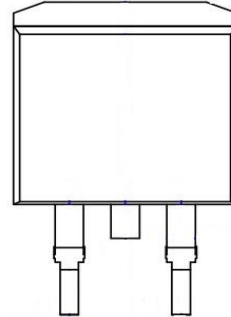
FEATURES AND BENEFITS

- 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, $T_J=125^\circ\text{C}$	0.31V
T_{Jmax}	175°C



Maximum Ratings ($T_a=25^\circ\text{C}$ 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 ($T_a=25^\circ\text{C}$ unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop ¹⁾	IF=5A	$T_a=25^\circ\text{C}$	V_F	0.41	0.45	V
	IF=100A	$T_a=25^\circ\text{C}$	V_F	0.96	1.00	V
	IF=5A	$T_a=125^\circ\text{C}$	V_F	0.31	0.35	V
	IF=100A	$T_a=125^\circ\text{C}$	V_F	0.70	0.74	V
Reverse Current ²⁾	VR=100V	$T_a=25^\circ\text{C}$	I_R	30	90	μA
	VR=100V	$T_a=125^\circ\text{C}$	I_R	15	45	mA

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)				
Characteristics		Symbol	Value	Unit
Typical Thermal Resistance, junction to case	TO-263	$R_{\theta JC}$	3.0	$^\circ\text{C/W}$
Operating Temperature Range (in DC Mode)		T_J	-65 to +175	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-65 to +150	$^\circ\text{C}$

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

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

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

RATINGS AND CHARACTERISTICS CURVES

Fig 1. Typical Forward Characteristics

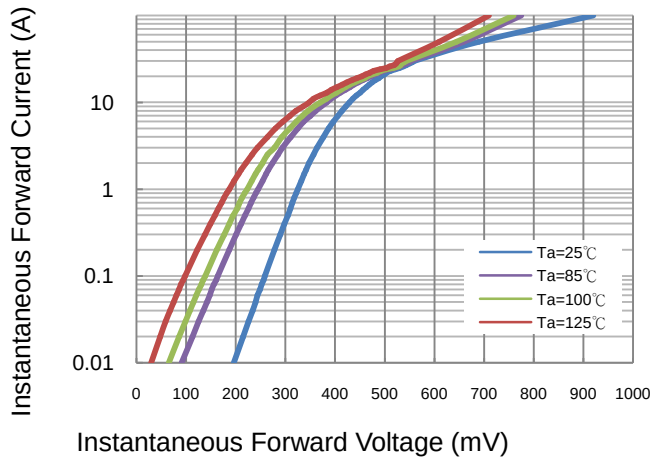


Fig 2. Typical Reverse Characteristics

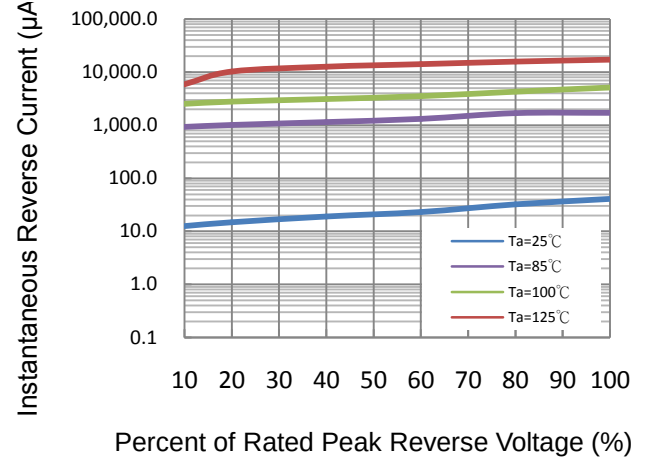


Fig 3. Typical Forward Current Derating Curve

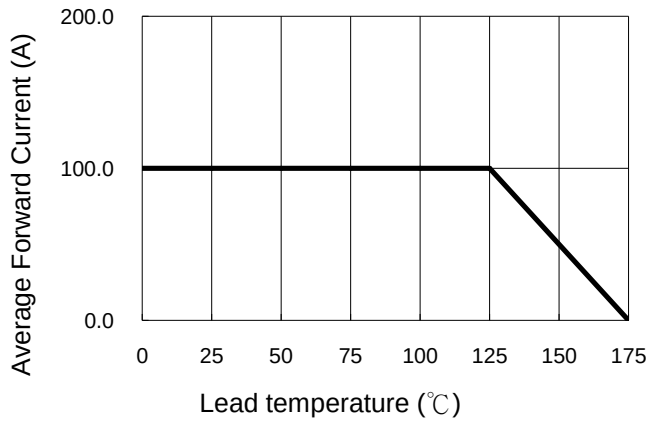
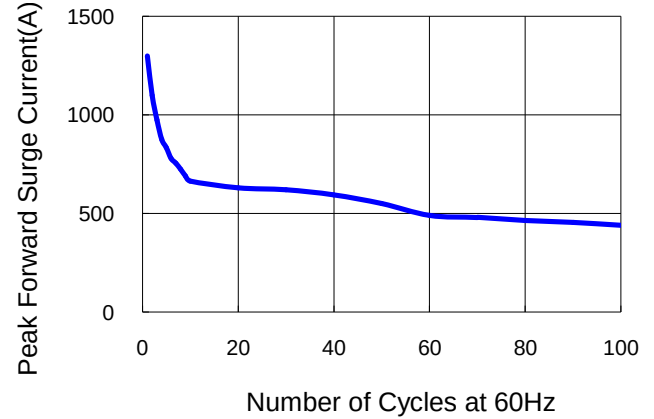
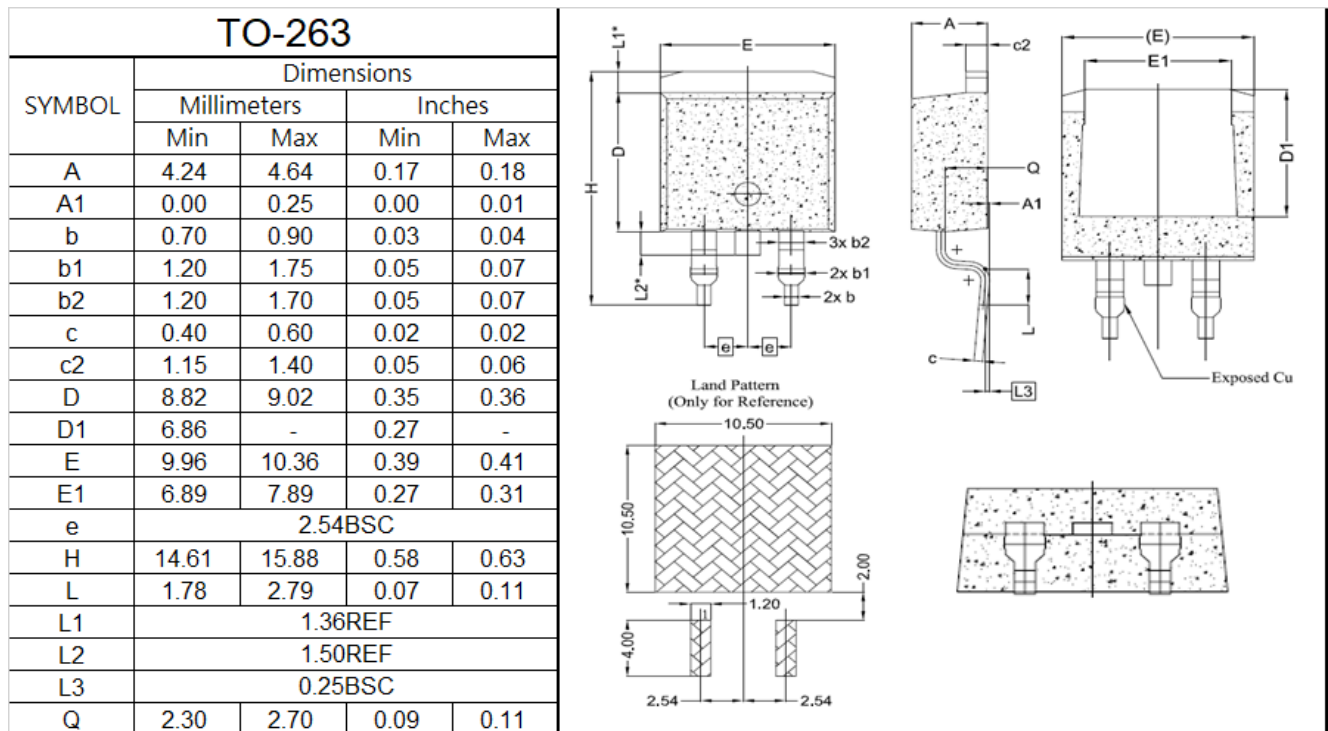


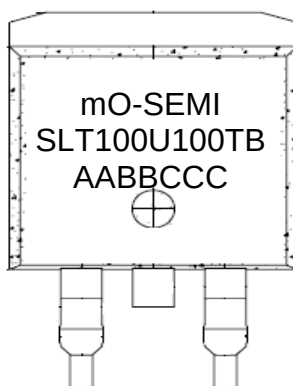
Fig 4. Non-repetitive Forward Surge Current



Package Outline Dimensions (in millimeters)



Marking Information



mO-SEMI	=Series Name
SLT100U100	=Part Number Marking Code
AABBCCC	=Product Tracking Code
*TB=TO-263	=Single TO-263