

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

- Epoxy : UL94 V-0 rated flame retardant
- Case: TOLL Package
- Terminals: Matte Tin annealed over copper

Primary Characteristic	
I_O	20A
V_{RRM}	100V
I_{FSM}	350A
V_F Typical= 3A, $T_J=125^{\circ}C$	0.32V
T_{Jmax}	150°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	20		Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)			I_{FSM}	350		Amps
Electrical Characteristics (Ta=25°C unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop ¹⁾	IF=3A	Ta=25°C	V_F	0.40	0.44	V
	IF=20A	Ta=25°C	V_F	0.68	0.72	V
	IF=3A	Ta=125°C	V_F	0.32	0.36	V
	IF=20A	Ta=125°C	V_F	0.57	0.61	V
Reverse Current ²⁾	VR=100	Ta=25°C	I_R	40	120	μA
	VR=100	Ta=125°C	I_R	20	60	mA
THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)						
Characteristics			Symbol	Value		Unit
Typical Thermal Resistance, junction to case		TOLL	$R_{\theta JC}$	0.45		°C/W
Operating Temperature Range (in DC Mode)			T_J	-65 to +150		°C
Storage Temperature Range			T_{STG}	-65 to +150		°C

Notes (1): Pulse test: 300μs 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

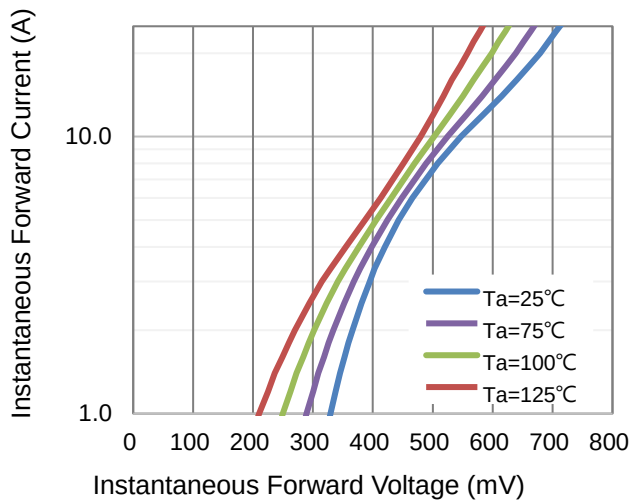


Fig 2. Typical Reverse Characteristics

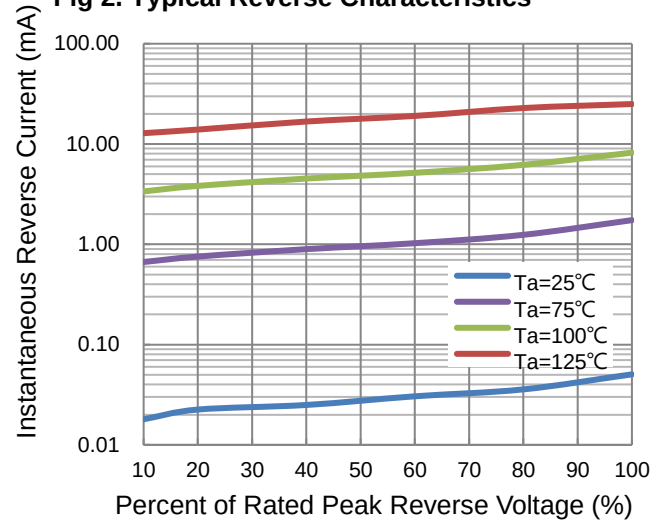


Fig 3. Typical Forward Current Derating Curve

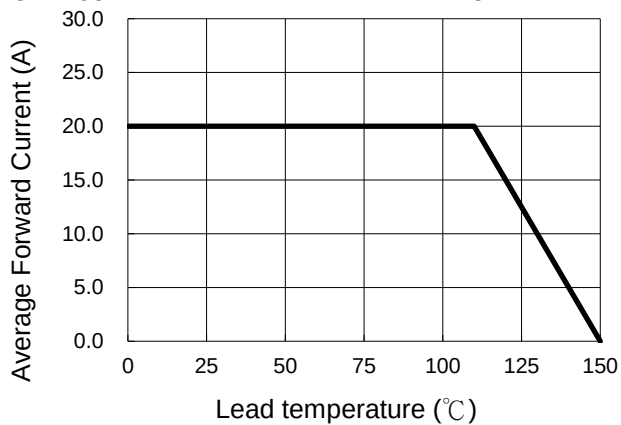
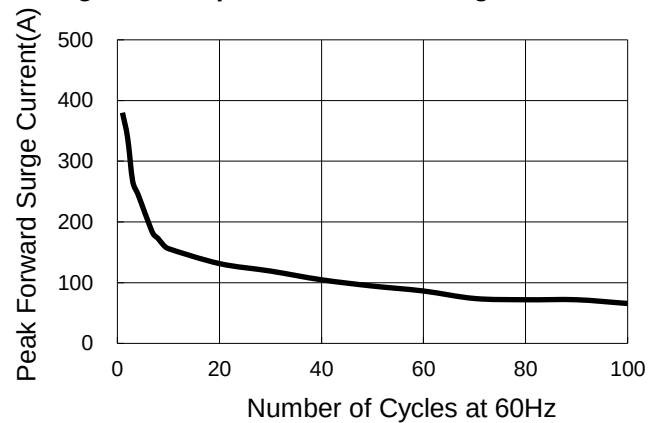
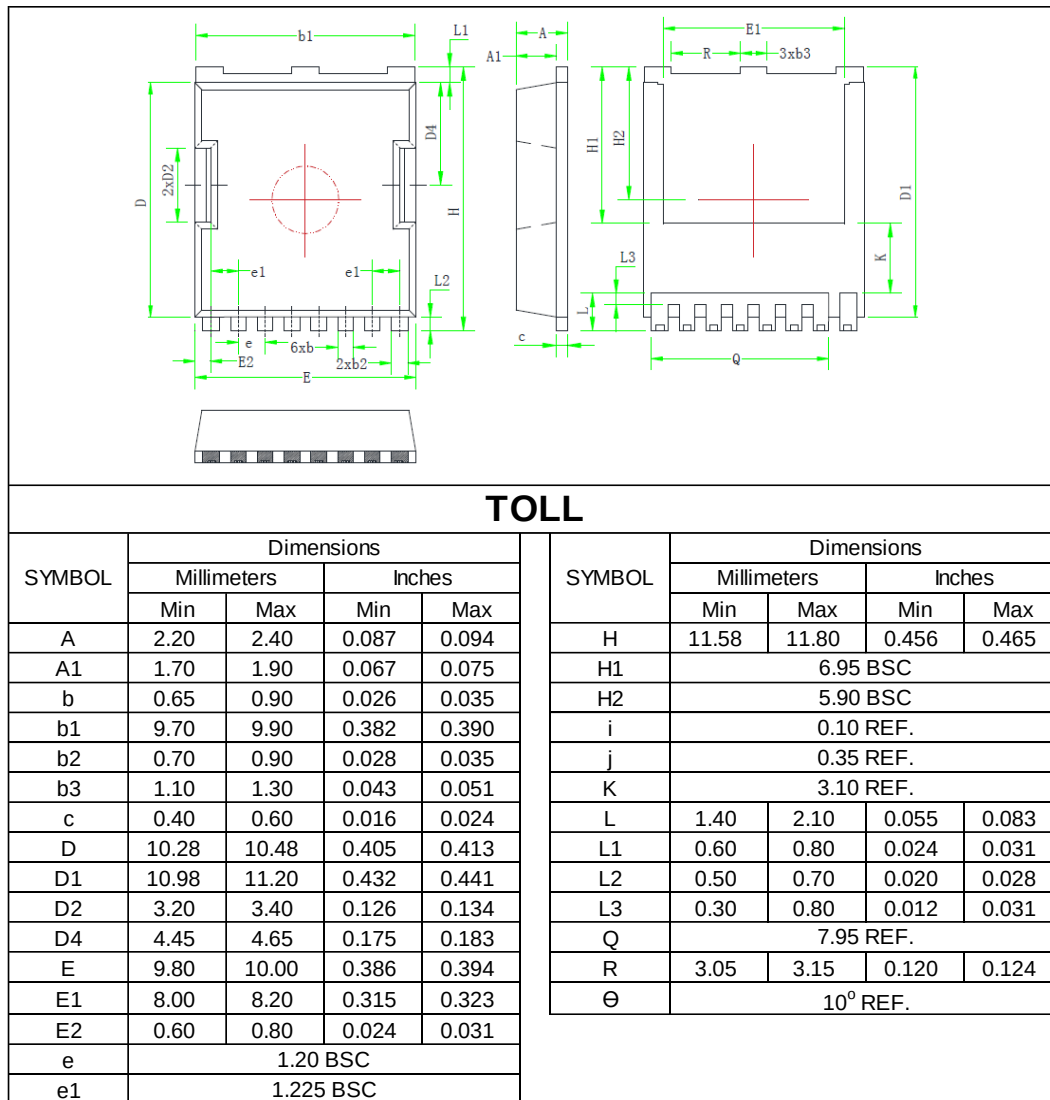


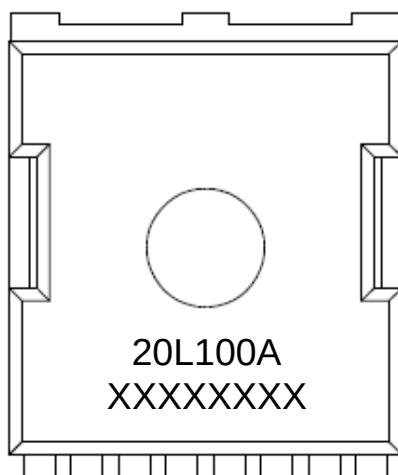
Fig 4. Non-repetitive Forward Surge Current



Package Outline Dimensions (in millimeters)



Marking Information



mO-SEMI
20L100A
XXXXXXXX
*A=TOLL

=Series Name
=Part Number Marking Code
=Product Tracking Code
=Single TOLL