

Surface Mount Schottky Barrier Rectifier Voltage 100V Current 20 Amperes

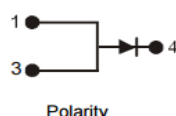
FEATURES AND BENEFITS

- 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-252 Package
- Terminals: Matte Tin annealed over copper
- Weight: Approximated 1.4 grams

Primary Characteristic	
I_O	20A
V_{RRM}	100V
I_{FSM}	200A
V_F Typical=5A, $T_J=125^\circ\text{C}$	0.48V
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	20	Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200	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	0.57	0.61	V
	IF=20A	Ta=25°C	V_F	0.70	0.74	V
	IF=5A	Ta=125°C	V_F	0.48	0.52	V
	IF=20A	Ta=125°C	V_F	0.64	0.68	V
Reverse Current ⁽²⁾	VR=100V	Ta=25°C	I_R	20	60	μA
	VR=100V	Ta=125°C	I_R	15	45	mA

THERMAL CHARACTERISTICS (TA=25°C unless otherwise noted)			
Characteristics	Symbol	Value	Unit
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 $\leq 40\text{ms}$

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

RATINGS AND CHARACTERISTICS CURVES

Fig 1. Typical Forward Characteristics

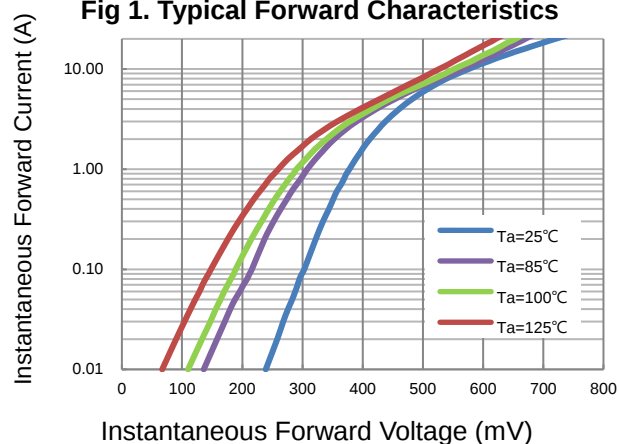


Fig 2. Typical Reverse Characteristics

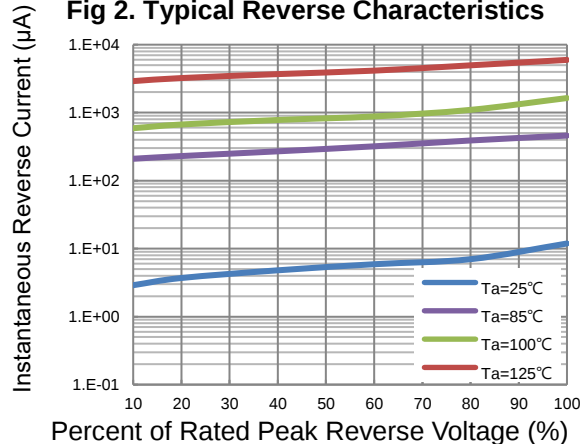


Fig 3. Typical Forward Current Derating Curve

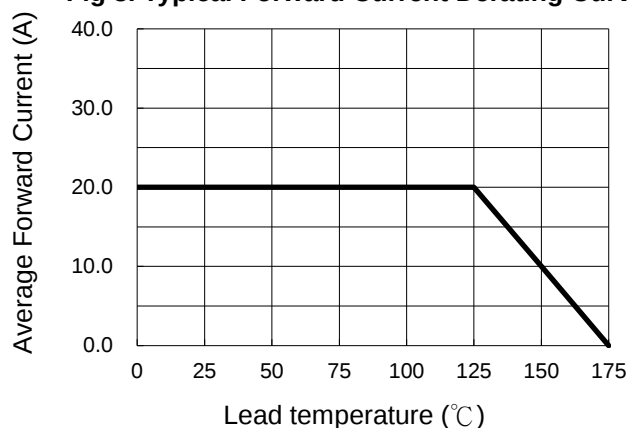
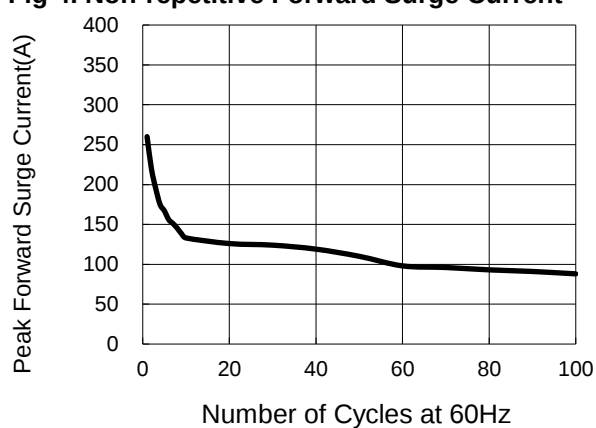
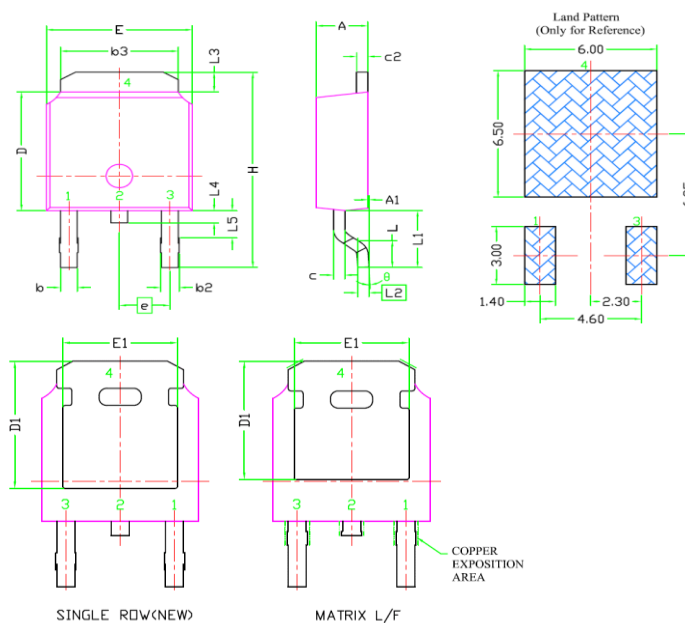


Fig 4. Non-repetitive Forward Surge Current

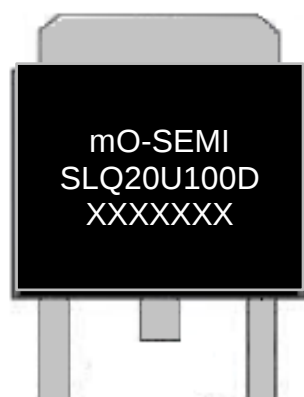


Package Outline Dimensions (in millimeters)

TO-252				
SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
E	6.40	6.73	0.252	0.265
L	1.40	1.77	0.055	0.070
L1	2.743 REF			
L2	0.508 BSC			
L3	0.89	1.27	0.035	0.050
L4	0.64	1.01	0.025	0.040
L5	-	-	-	-
D	6.00	6.22	0.236	0.245
H	9.40	10.40	0.370	0.409
b	0.64	0.88	0.025	0.035
b2	0.77	1.14	0.030	0.045
b3	5.20	5.46	0.205	0.215
e	2.286 BSC			
A	2.20	2.38	0.087	0.094
A1	0.00	0.13	0.000	0.005
c	0.46	0.60	0.018	0.024
c2	0.46	0.58	0.018	0.023
D1	5.21	-	0.205	-
E1	4.40	-	0.173	-
θ	0°	10°	0°	10°



Marking Information



mO-SEMI
SLQ20U100
XXXXXXX
D=TO-252

=Series Name
=Part Number Marking Code
=Product Tracking Code
=Single TO-252