Dual Common-Cathode Ultra Low VF Schottky Rectifier

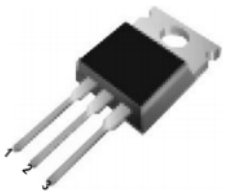
FEATURES AND BENEFITS

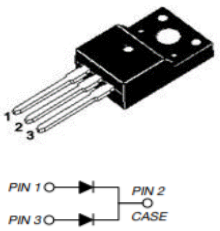
- Low power loss, high efficiency operation
- Low forward voltage drop
- Fast switching capability
- High forward surge capability
- Excellent High Temperature Stability

MECHANICAL DATA

- Epoxy：UL94 V-0 rated flame retardant
- Case: TO-220-3L / ITO-220AB Package
- Terminals: Matte Tin annealed over copper
- Weight: Approximated 2.03 grams

Primary Characteristic	
I_O	2X20A
V_{RRM}	45V
I_{FSM}	275A
V_F Typical=2.5A, T_J=125°C	0.24V
T_{Jmax}	150°C





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	20	Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	275	Amps

Electrical Characteristics (Ta=25°C unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop[1)]	IF=2.5A	Ta=25°C	V_F	0.37	0.41	V
	IF=20A	Ta=25°C	V_F	0.50	0.54	V
	IF=2.5A	Ta=125°C	V_F	0.24	0.28	V
	IF=20A	Ta=125°C	V_F	0.42	0.46	V
Reverse Current [2)]	VR=45V	Ta=25°C	I_R	30	90	μA
	VR=45V	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 +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 ≦40ms

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

RATINGS AND CHARACTERISTICS CURVES

Fig 1. Typical Forward Characteristics

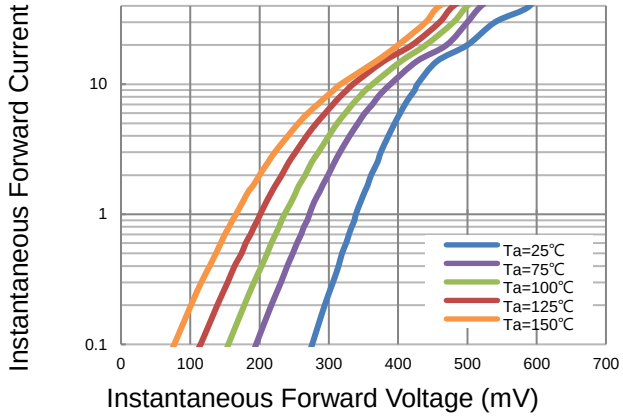


Fig 2. Typical Reverse Characteristics

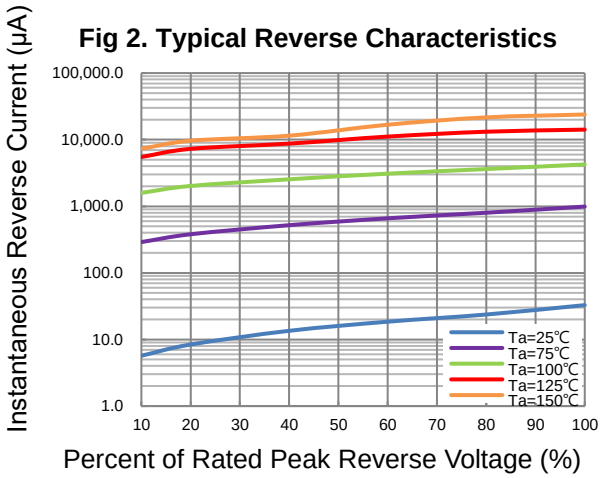


Fig 3. Typical Forward Current Derating Curve

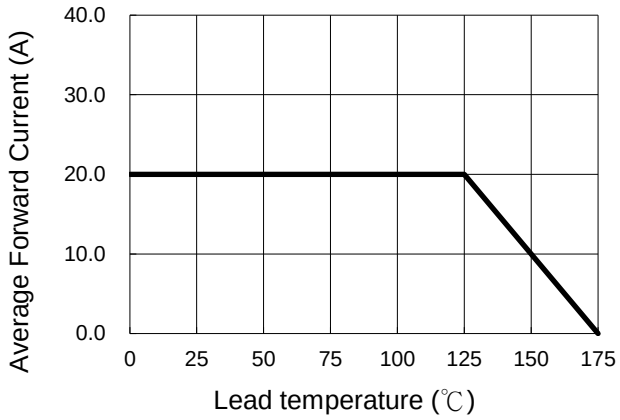
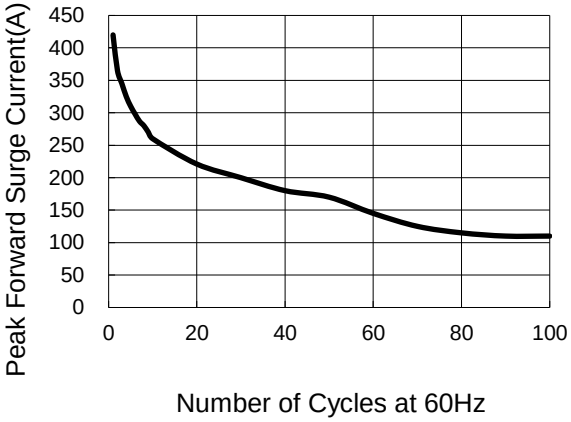


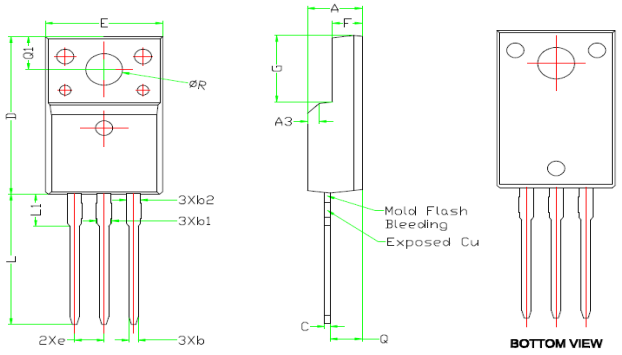
Fig 4. Non-repetitive Forward Surge Current



Package Outline Dimensions (in millimeters)

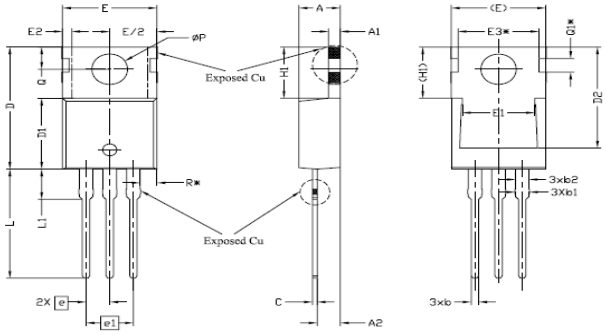
ITO-220

SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	4.60	4.80	0.18	0.19
b	0.70	0.91	0.03	0.04
b1	1.20	1.47	0.05	0.06
b2	1.10	1.30	0.04	0.05
C	0.45	0.63	0.02	0.02
D	15.80	15.97	0.62	0.63
e	2.54			
E	10.00	10.30	0.39	0.41
F	2.44	2.64	0.10	0.10
G	6.50	6.90	0.26	0.27
L	12.90	13.30	0.51	0.52
L1	3.13	3.33	0.12	0.13
Q	2.65	2.85	0.10	0.11
Q1	3.20	3.40	0.13	0.13
ΦR	3.08	3.28	0.12	0.13

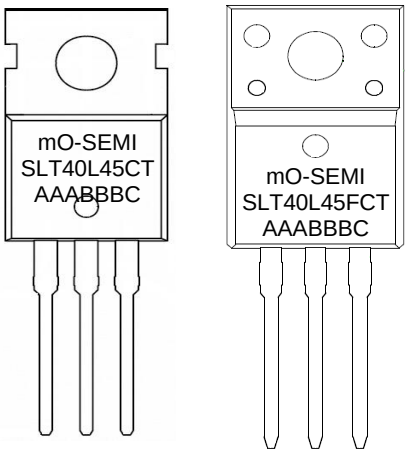


TO-220

SYMBOL	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	4.24	4.64	0.17	0.18
A1	1.15	1.40	0.05	0.06
A2	2.30	2.70	0.09	0.11
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
D	14.70	16.00	0.58	0.63
D1	8.82	9.02	0.35	0.36
D2	12.43	12.83	0.49	0.51
E	9.96	10.36	0.39	0.41
E1	6.86	8.89	0.27	0.35
E2	-	0.76	-	0.03
E3*	8.7REF.			
e	2.54BSC			
e1	5.08BSC			
H1	6.30	6.60	0.25	0.26
L	13.47	13.97	0.53	0.55
L1	3.60	4.00	0.14	0.16
φP	3.75	3.93	0.15	0.15
Q	2.60	3.00	0.10	0.12
Q1*	1.73REF.			
R*	1.82REF.			



Marking Information



mO-SEMI	=Series Name
SLT40L45	=Part Number Marking Code
AAABBBC	=Product Tracking Code
*FCT=ITO-220	=Dual ITO-220
*CT=TO-220	=Dual TO-220