

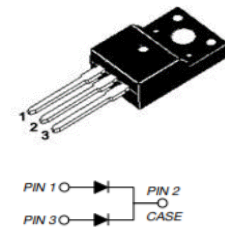
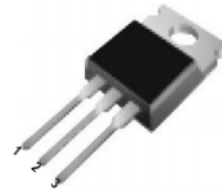
### FEATURES AND BENEFITS

- 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 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, $T_J=125^\circ\text{C}$	0.24V
$T_{Jmax}$	150°C



Maximum Ratings ( $T_a=25^\circ\text{C}$ 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 ( $T_a=25^\circ\text{C}$ unless otherwise specified)						
Characteristics			Symbol	Typ.	Max.	Unit
Forward Voltage Drop <sup>1)</sup>	IF=2.5A	$T_a=25^\circ\text{C}$	$V_F$	0.37	0.41	V
	IF=20A	$T_a=25^\circ\text{C}$	$V_F$	0.50	0.54	V
	IF=2.5A	$T_a=125^\circ\text{C}$	$V_F$	0.24	0.28	V
	IF=20A	$T_a=125^\circ\text{C}$	$V_F$	0.42	0.46	V
Reverse Current <sup>2)</sup>	VR=45V	$T_a=25^\circ\text{C}$	$I_R$	30	90	$\mu\text{A}$
	VR=45V	$T_a=125^\circ\text{C}$	$I_R$	15	45	mA

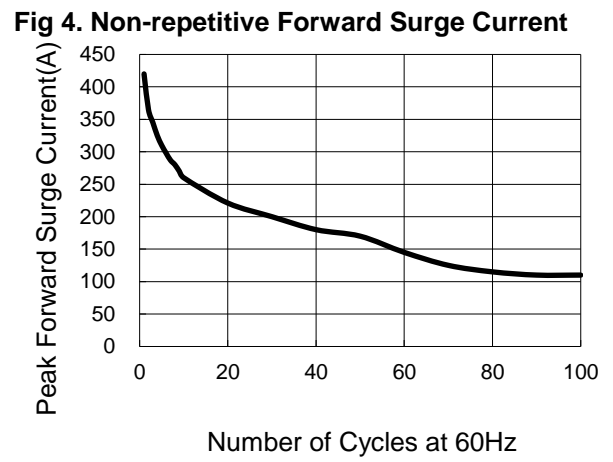
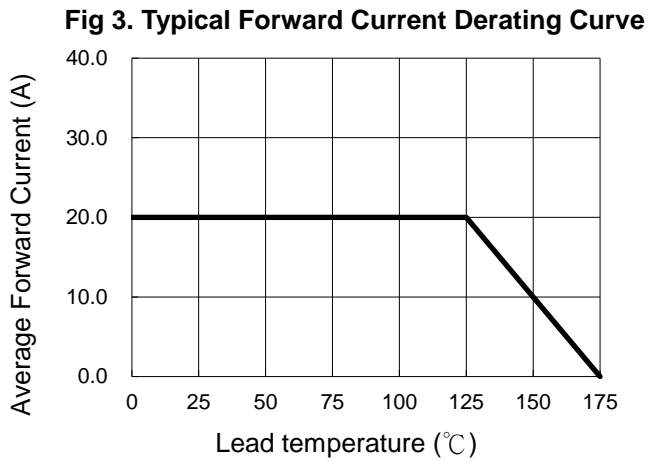
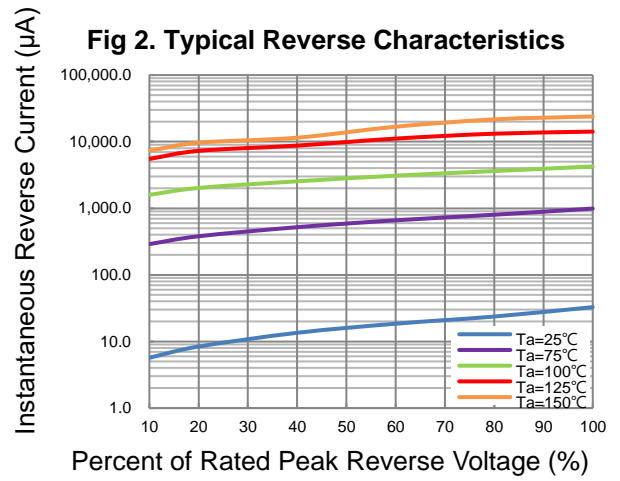
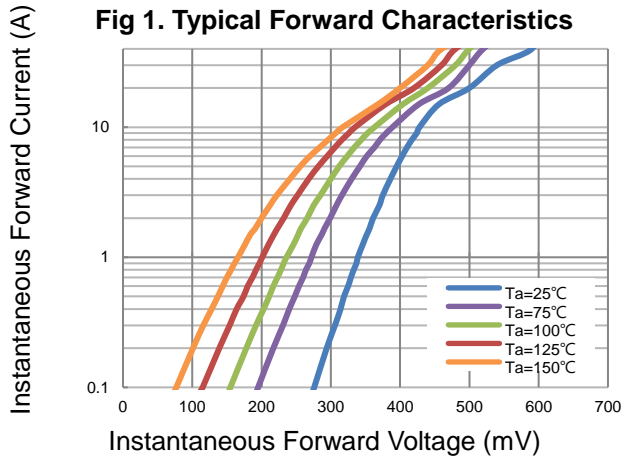
THERMAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)				
Characteristics		Symbol	Value	Unit
Typical Thermal Resistance, junction to case	TO-220AB	$R_{\theta JC}$	2.8	$^\circ\text{C/W}$
Typical Thermal Resistance, junction to case	ITO-220AB	$R_{\theta JC}$	4.0	$^\circ\text{C/W}$
Operating Temperature Range ( in DC Mode)		$T_J$	-65 to +150	$^\circ\text{C}$
Storage Temperature Range		$T_{STG}$	-65 to +150	$^\circ\text{C}$

Notes (1): Pulse test: 300 $\mu\text{s}$  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



## Package Outline Dimensions (in millimeters)

