



# GF1645LA

**16 AMPS. SCHOTTKY BARRIER RECTIFIER**

**Voltage Range**  
**45 Volts**  
**Current**  
**16.0 Amperes**

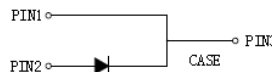
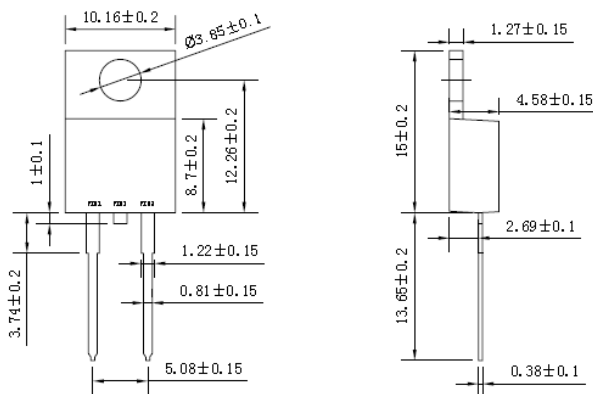
**TO-220AC**

## Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

## Mechanical Data

- Cases: TO-220AC molded plastic
- Epoxy: UL 94V-O rate flame retardant
- Terminals: Lead solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: As marked
- High temperature soldering guaranteed: 260°C/10 seconds/ .25", (6.35mm) from case
- Weight: 2.24 grams



Dimensions in millimeters

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

Type Number		GF1645LA	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS Voltage	$V_{RMS}$	31.5	V
Maximum DC Blocking Voltage	$V_{DC}$	45	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	16.0	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	275	A
Peak Repetitive Reverse Surge Current (Note 1)	$I_{RRM}$	1.0	A
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=16A$ , $T_c=25^\circ C$	$V_F$	0.65	V
Maximum Instantaneous Reverse Current @ $T_j=25^\circ C$ at Rated DC Blocking Voltage (Note 2) @ $T_j=125^\circ C$	$I_R$	0.5 50	mA mA
Typical Junction Capacitance (Note 3)	$C_j$	450	pF
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5	°C/W
Operating Junction Temperature Range In DC forward mode	$T_j$	-55 to +150 -55 to +200	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C

## NOTES:

1. 2.0us Pulse Width, f=1.0 KHz
2. Pulse Test: 300us Pulse Width, 1% Duty Cycle
3. Mounted on Heatsink Size of 2 in x 3 in x 0.25in Al-Plate.

# RATING AND CHARACTERISTIC CURVES GF1645LA



FIG. 1-FORWARD CURRENT DERATING CURVE

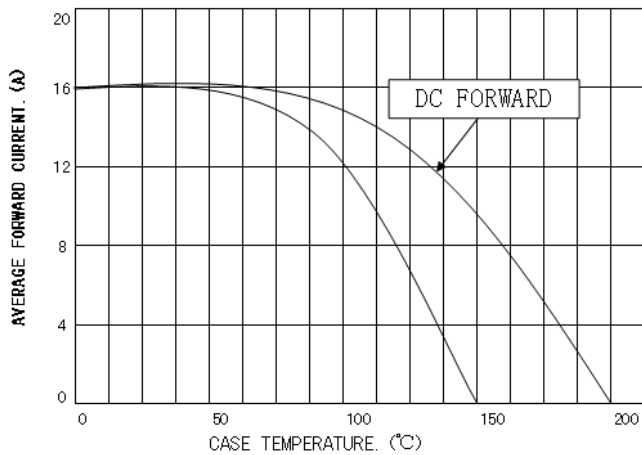


FIG. 2-MAXIMUM NON-REPETITIVE

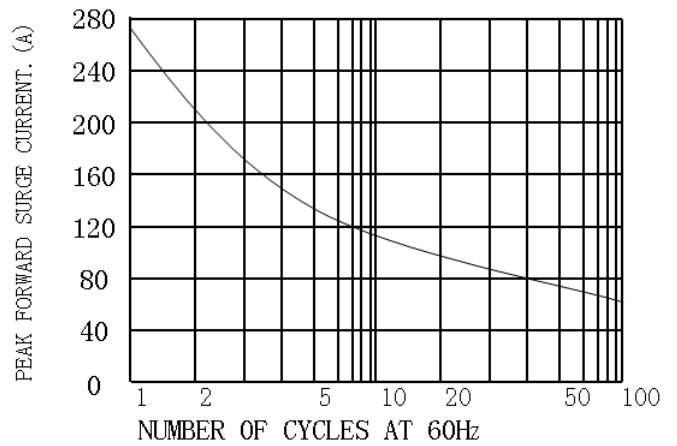


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

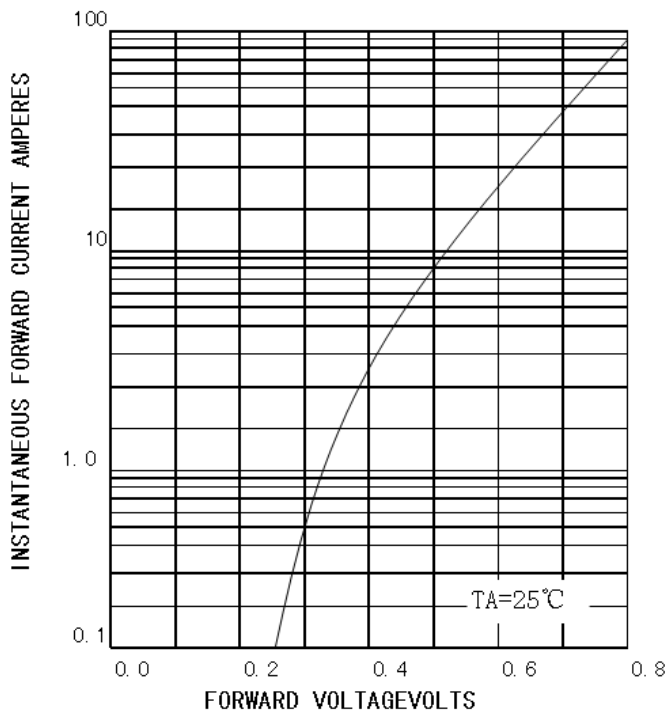


FIG. 4-TYPICAL REVERSE CHARACTERISTIC

