

**$V_{RSM} = 60\text{ V}$ ,  $I_{F(AV)} = 6\text{ A}$**   
**Schottky Diode**  
**FMB-G16L**

**Description**

The FMB-G16L is a 60 V, 6 A Schottky diode that has the improved characteristics of  $V_F$  and  $I_R$ . These characteristics realize the improvement of power supply efficiency and the high frequency system.

**Features**

- $V_{RSM}$  ----- 60 V
- $I_{F(AV)}$  ----- 6 A
- $V_F$  ( $I_F = 6\text{ A}$ ) ----- 0.54 V typ.
- Bare Lead Frame: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0

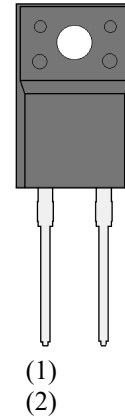
**Applications**

High speed switching applications as follows:

- DC-DC Converter
- Adapter

**Package**

TO220F-2L



(1) Cathode  
(2) Anode

Not to scale

## FMB-G16L

### Absolute Maximum Ratings

Unless otherwise specified,  $T_A = 25\text{ }^\circ\text{C}$ .

Parameter	Symbol	Conditions	Rating	Unit
Nonrepetitive Peak Reverse Voltage	$V_{RSM}$		60	V
Repetitive Peak Reverse Voltage	$V_{RM}$		60	V
Average Forward Current	$I_{F(AV)}$	See Figure 1 and Figure 2	6	A
Surge Forward Current	$I_{FSM}$	Half cycle sine wave, positive side, 10 ms, 1 shot	50	A
I <sup>2</sup> t Limiting Value	$I^2t$	$1\text{ ms} \leq t \leq 10\text{ ms}$	12.5	A <sup>2</sup> s
Junction Temperature	$T_J$		-40 to 150	°C
Storage Temperature	$T_{STG}$		-40 to 150	°C

### Electrical Characteristics

Unless otherwise specified,  $T_A = 25\text{ }^\circ\text{C}$ .

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	$V_F$	$I_F = 6\text{ A}$	—	0.54	0.72	V
Reverse Leakage Current	$I_R$	$V_R = V_{RM}$	—	—	5	mA
Reverse Leakage Current under High Temperature	$H \cdot I_R$	$V_R = V_{RM}, T_J = 150\text{ }^\circ\text{C}$	—	—	200	mA
Thermal Resistance <sup>(1)</sup>	$R_{th(J-C)}$		—	—	4	°C/W

### Mechanical Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Unit
Heatsink Mounting Screw Torque		0.490	—	0.686	N·m
Package Weight		—	1.8	—	g

<sup>(1)</sup>  $R_{th(J-C)}$  is thermal resistance between junction and the case. The case temperature is measured at the back side near the screw hole.

Derating Curves

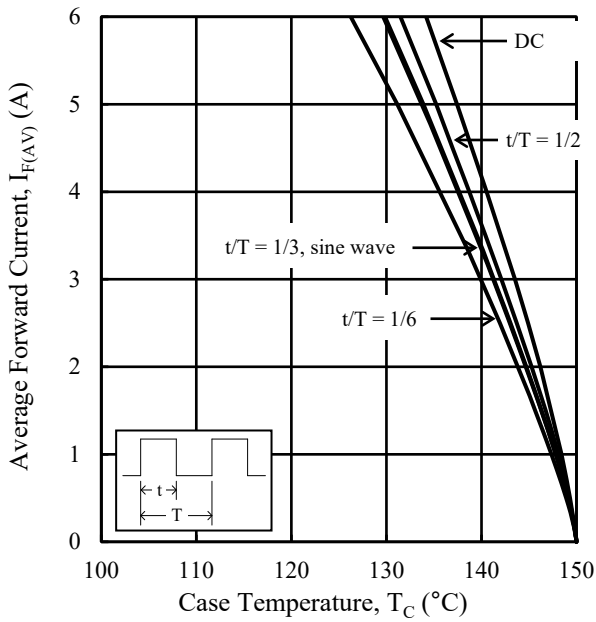


Figure 1.  $I_{F(AV)}$  vs.  $T_C$  ( $T_J = 150\text{ }^\circ\text{C}$ ,  $V_R = 0\text{ V}$ )

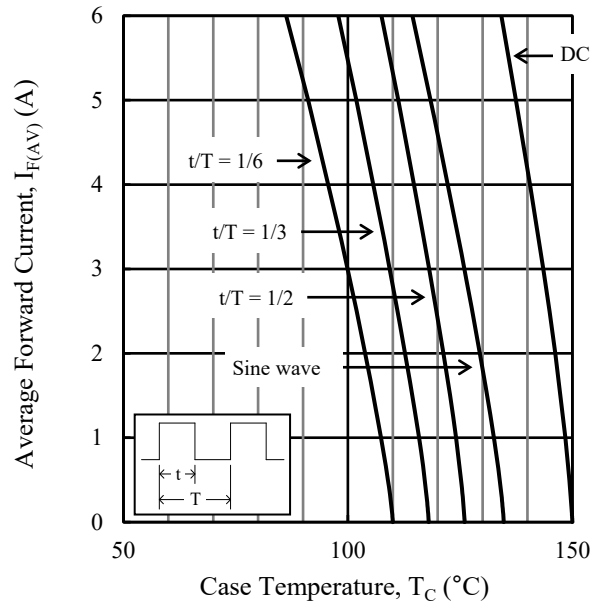


Figure 2.  $I_{F(AV)}$  vs.  $T_C$  ( $T_J = 150\text{ }^\circ\text{C}$ ,  $V_R = 60\text{ V}$ )

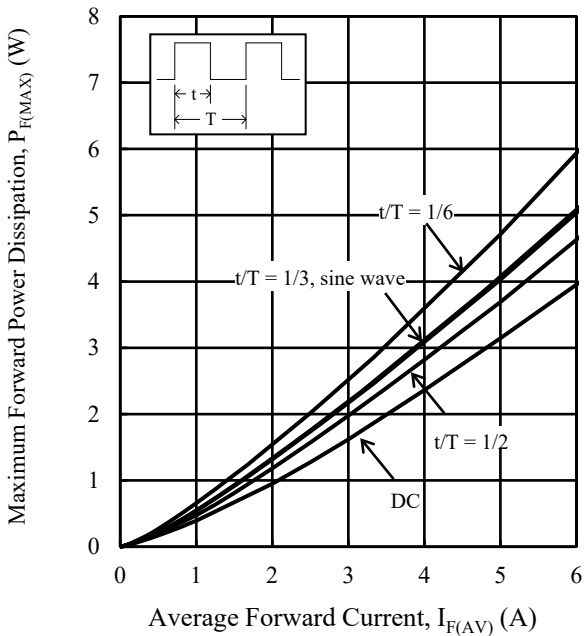


Figure 3.  $P_{F(MAX)}$  vs.  $I_{F(AV)}$  ( $T_J = 150\text{ }^\circ\text{C}$ )

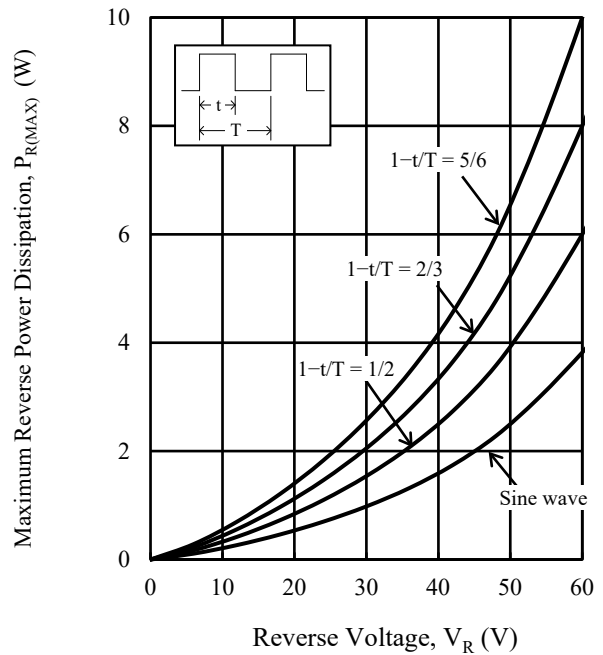


Figure 4.  $P_{R(MAX)}$  vs.  $V_R$  ( $T_J = 150\text{ }^\circ\text{C}$ )

Characteristic Curves

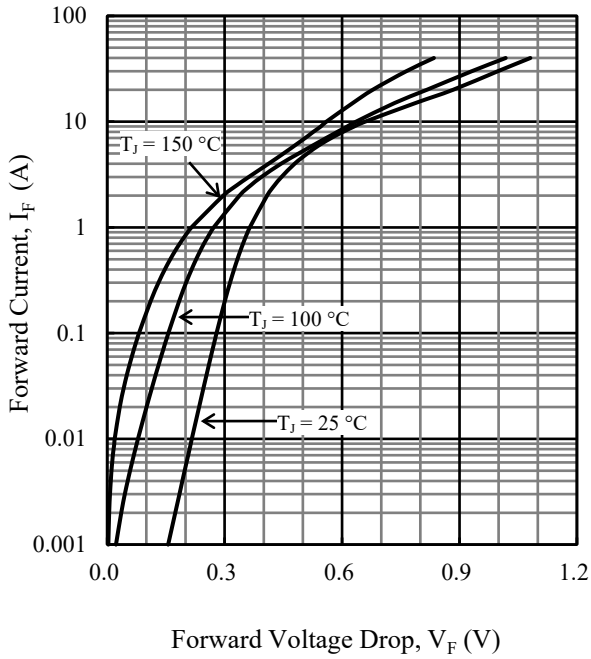


Figure 5. Typical Characteristics:  $I_F$  vs.  $V_F$

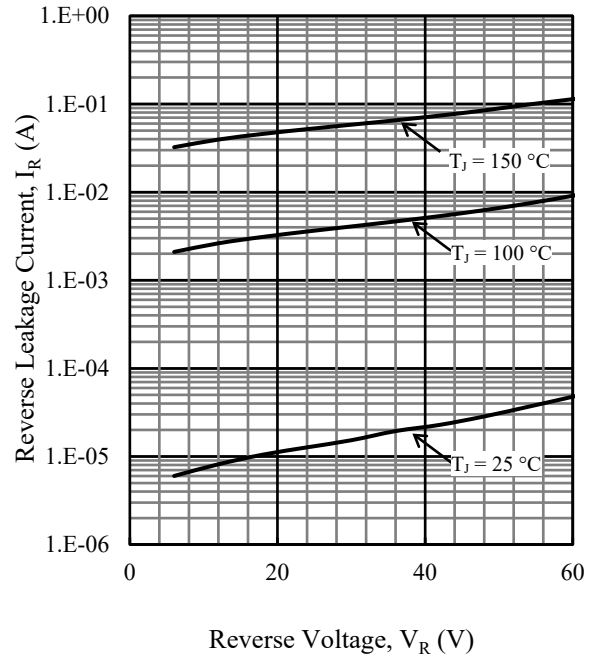


Figure 6. Typical Characteristics:  $I_R$  vs.  $V_R$

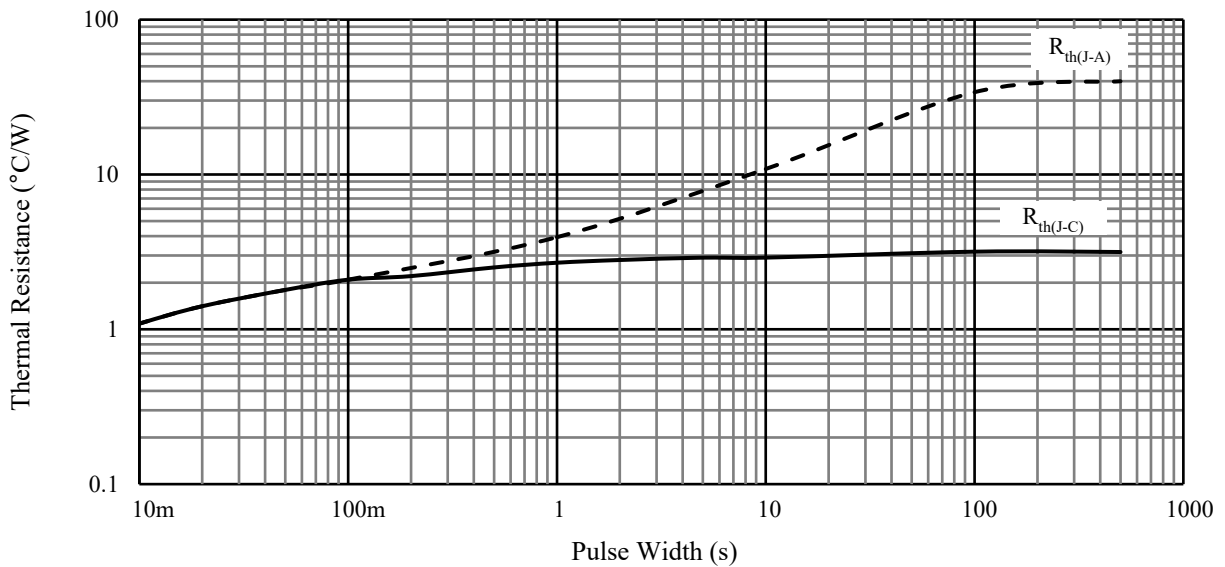
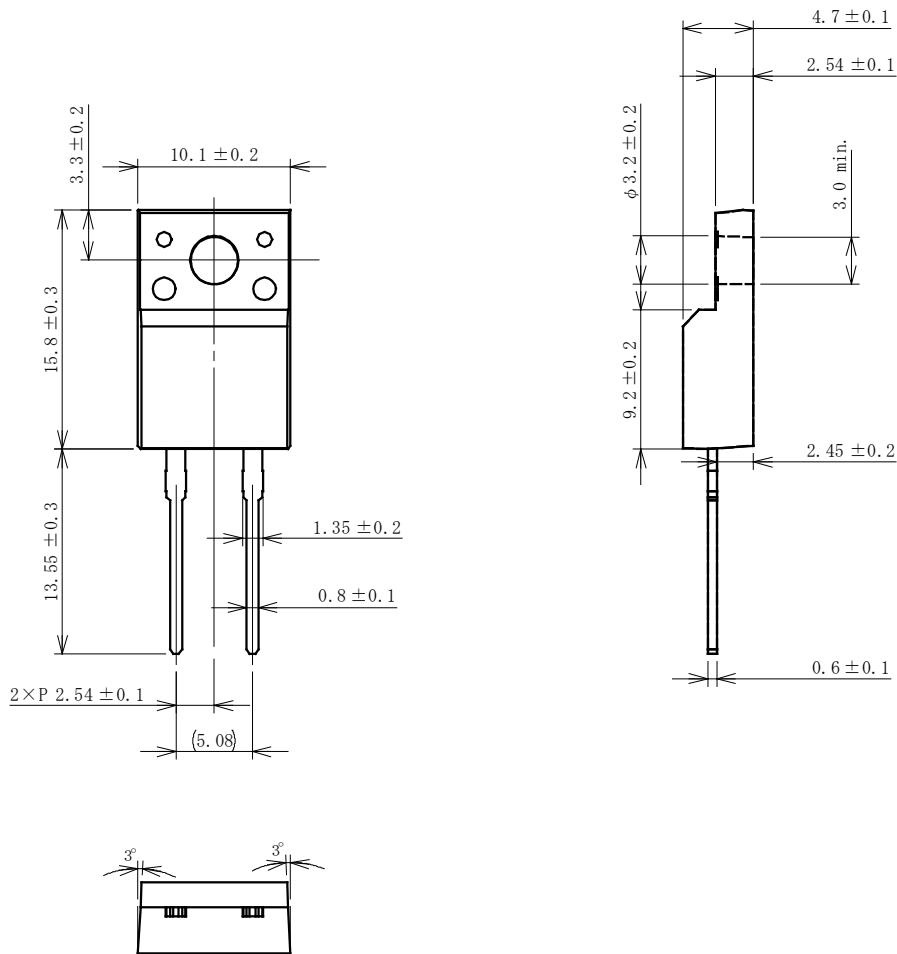


Figure 7. Typical Transient Thermal Resistance Characteristics

# FMB-G16L

## Physical Dimensions

### • TO220F-2L



### NOTES:

- Dimensions in millimeters
- All the dimensions exclude mold flashes.
- Bare lead frame: Pb-free (RoHS compliant)
- When soldering the products, it is required to minimize the working time within the following limits:
  - Flow: 270 °C / 7 s, 1 time
  - Soldering Iron: 350 °C / 3.5 s, 1 time
  - Soldering should be at a distance of at least 1.5 mm from the body of the product.

## Marking Diagram

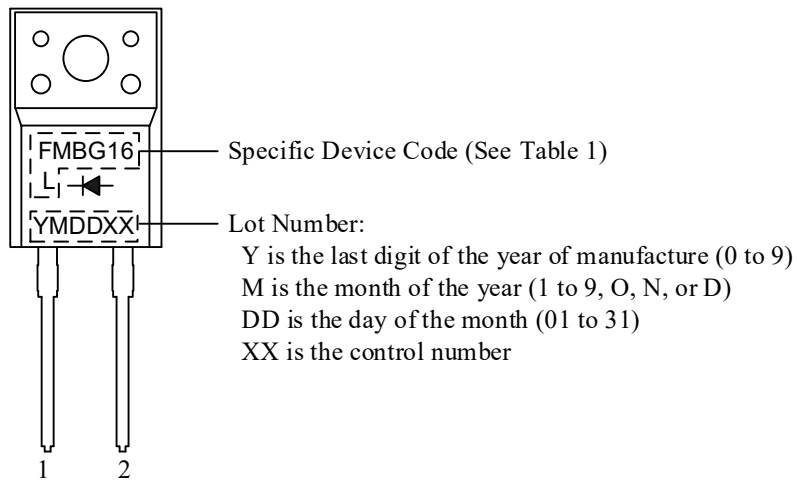


Table 1. Specific Device Code

Specific Device Code	Part Number
FMBG16L	FMB-G16L

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