

**V<sub>RSM</sub> = 100 V, I<sub>F(AV)</sub> = 20 A**  
**Trench Schottky Diode**  
**FMET-22010**

## Features

FMET-22010 is 100 V / 20 A Schottky Diode of the Trench structure and has the improved characteristics of V<sub>F</sub> and I<sub>R</sub>. These characteristics realize the improving of power supply efficiency, and the high frequency system.

- V<sub>RM</sub>----- 100 V
- I<sub>F(AV)</sub>-----20A
- V<sub>F</sub> (125 °C, I<sub>F</sub> = 5 A)----- 0.57 V typ.

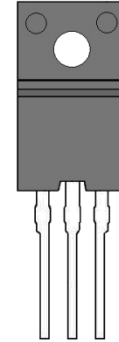
## Applications

The high speed switching applications as follows:

- DC-DC Converter
- Adapter

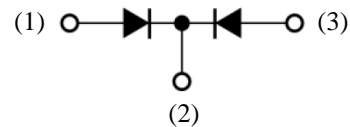
## Package

TO220F-3L



(1)(2)(3)

(1) Anode  
(2) Cathode  
(3) Anode



Not to scale

## Absolute Maximum Ratings

- Unless otherwise specified, T<sub>j</sub> is 25 °C

Parameter	Symbol	Rating	Unit	Notes
Peak Repetitive Reverse Voltage	V <sub>RSM</sub>	100	V	
Repetitive Reverse Voltage	V <sub>RM</sub>	100	V	
Average Forward Current	I <sub>F(AV)</sub>	20	A	
Surge Forward Current	I <sub>FSM</sub>	110	A	10 ms Half sinewave, one shot
Junction Temperature	T <sub>j</sub>	-40 to 150	°C	
Storage Temperature	T <sub>stg</sub>	-40 to 150	°C	

## Electrical Characteristics

- Unless otherwise specified, T<sub>j</sub> is 25 °C

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	V <sub>F</sub>	I <sub>F</sub> = 5 A	—	0.67	—	V
		I <sub>F</sub> = 10 A	—	0.81	0.85	V
Forward Voltage Drop Under High Temperature	H·V <sub>F</sub>	T <sub>j</sub> = 125 °C, I <sub>F</sub> = 5 A	—	0.57	—	V
		T <sub>j</sub> = 125 °C, I <sub>F</sub> = 10 A	—	0.67	—	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = V <sub>RM</sub>	—	0.4	70	μA
Reverse Leakage Current Under High Temperature	H·I <sub>R</sub>	V <sub>R</sub> = V <sub>RM</sub> , T <sub>j</sub> = 150 °C	—	4.0	35	mA
Thermal Resistance*	R <sub>th(j-c)</sub>		—	—	4.0	°C/W

\* R<sub>th(j-c)</sub> is thermal resistance between junction and case. Case temperature (T<sub>C</sub>) is measured at the under of the screw hole of case.

## Performance Curves

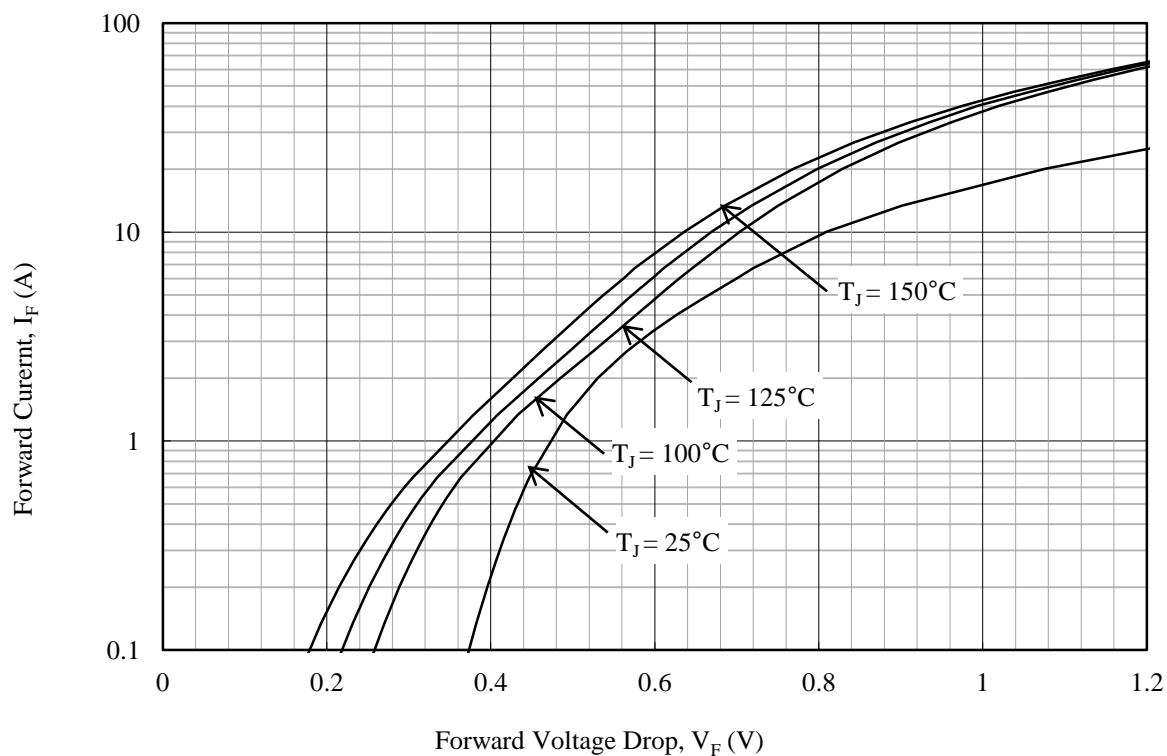


Figure 1 Typical Forward Characteristics

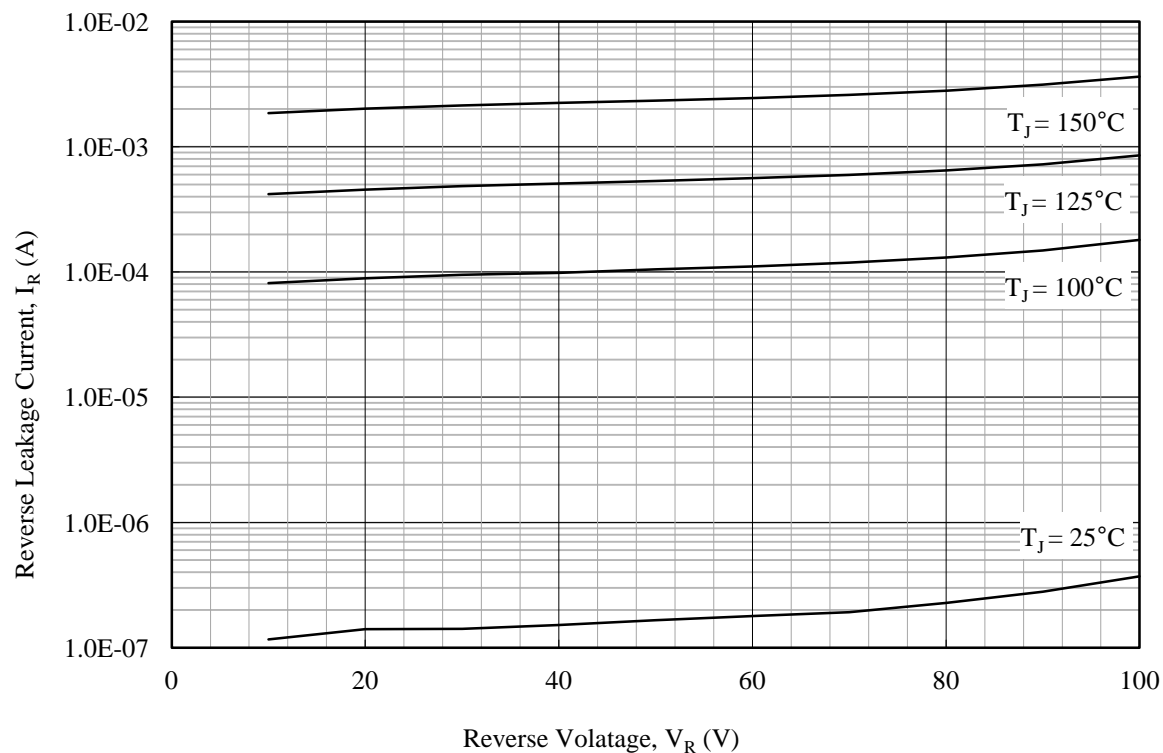


Figure 2 Typical Reverse Leakage Current Characteristics

Power Dissipation Curves

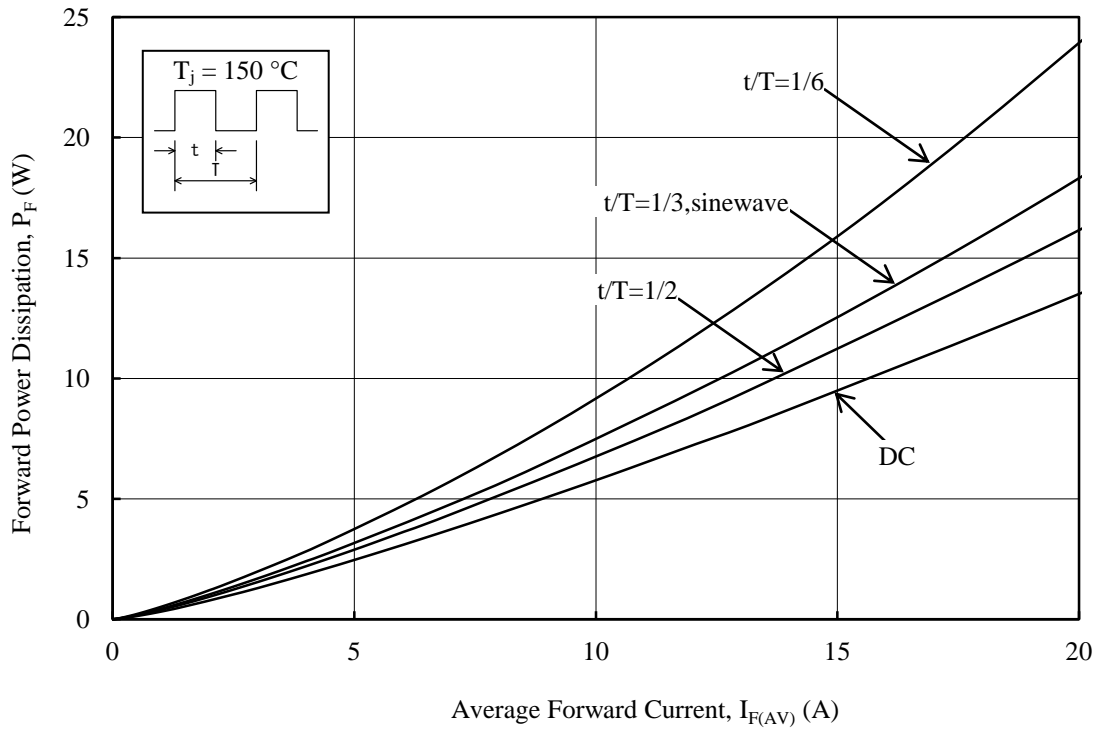


Figure 3 Forward Power Dissipation,  $P_F$  vs. Average Forward Current,  $I_{F(AV)}$

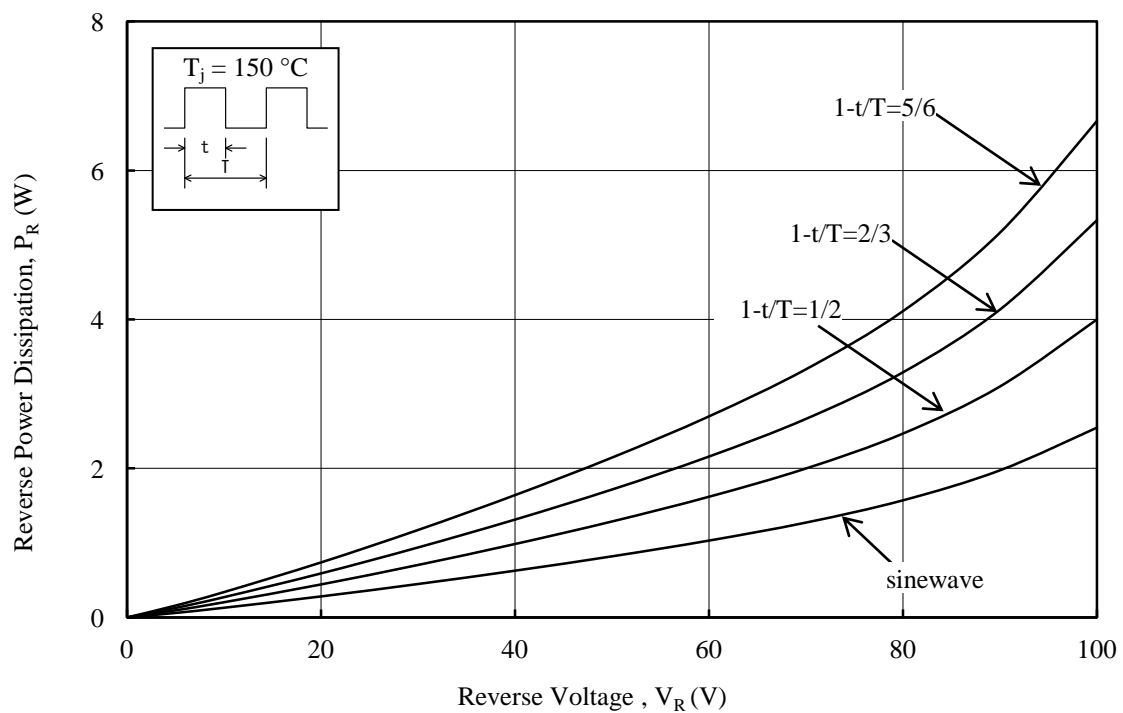
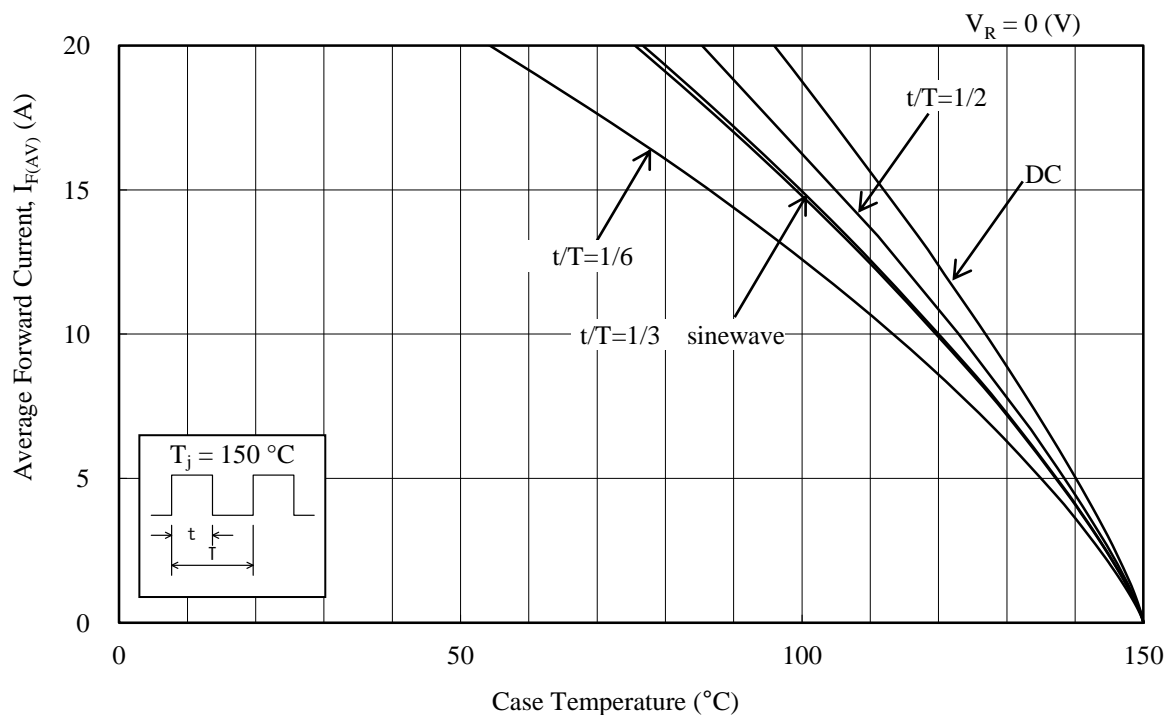
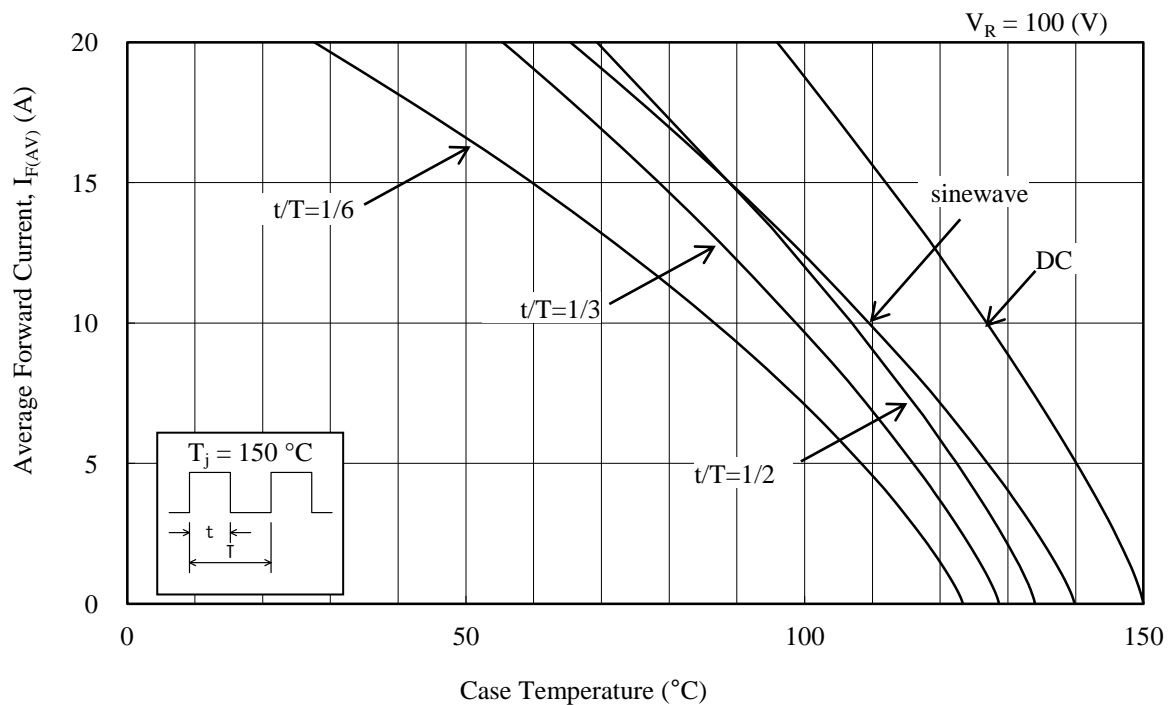


Figure 4 Reverse Power Dissipation,  $P_R$  vs. Reverse Voltage,  $V_R$

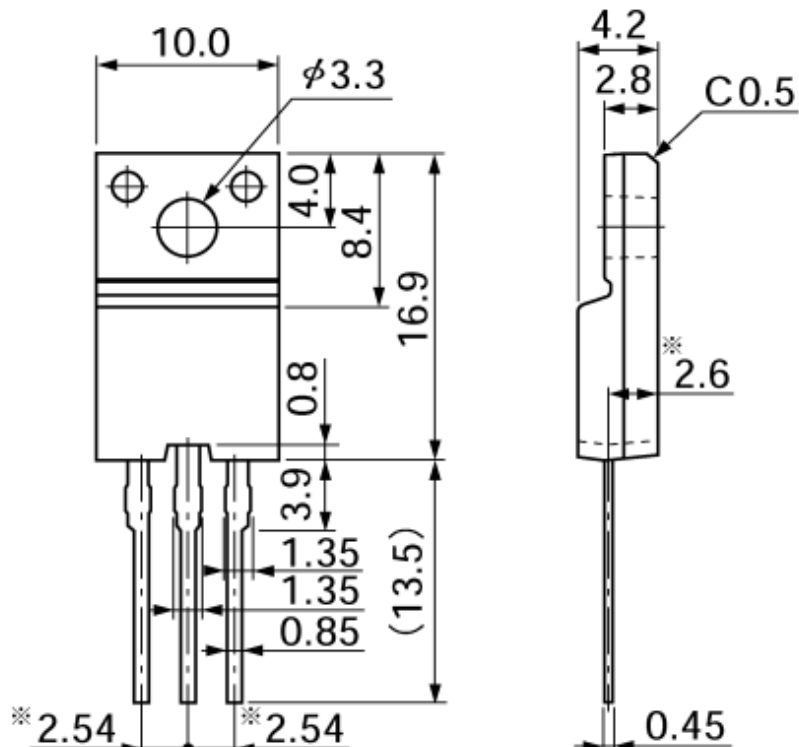
## Derating Curves

Figure 5 Average Rectified Forward Current,  $I_{F(AV)}$  vs. Case TemperatureFigure 6 Average Rectified Forward Current,  $I_{F(AV)}$  vs. Case Temperature

## FMET-22010

### Package Outline

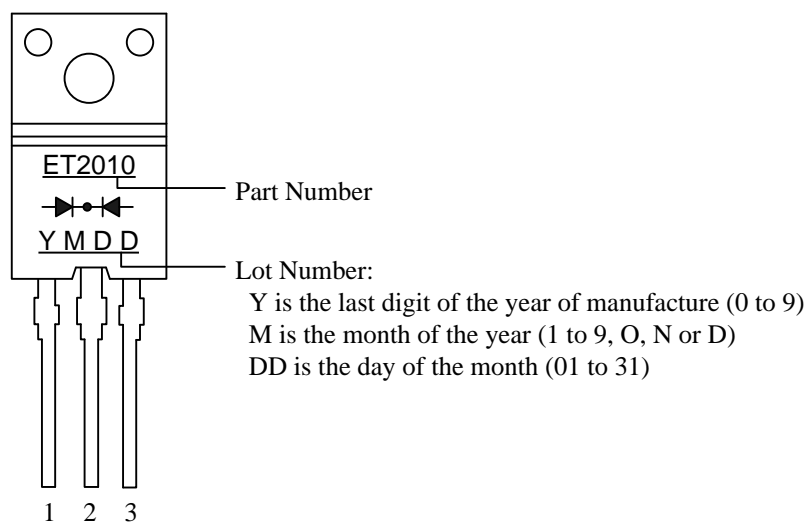
TO220F-3L



#### NOTES:

- 1) Dimension is in millimeters.
- 2) Pin treatment Pb-free. Device composition compliant with the RoHS directive.

### Marking Diagram



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