

V_{RSM} = 100 V, I_{F(AV)} = 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_F and I_R. These characteristics realize the improving of power supply efficiency, and the high frequency system.

- V_{RM}----- 100 V
- I_{F(AV)}-----20A
- V_F (125 °C, I_F = 5 A)----- 0.57 V typ.

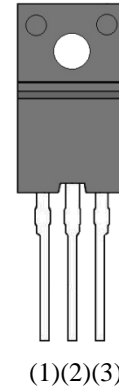
Applications

The high speed switching applications as follows:

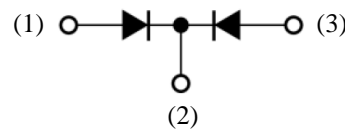
- DC-DC Converter
- Adapter

Package

TO220F-3L



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



Not to scale

Absolute Maximum Ratings

- Unless otherwise specified, T_j is 25 °C

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

Electrical Characteristics

- Unless otherwise specified, T_j is 25 °C

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

* R_{th(j-c)} is thermal resistance between junction and case. Case temperature (T_C) is measured at the under of the screw hole of case.

Performance Curves

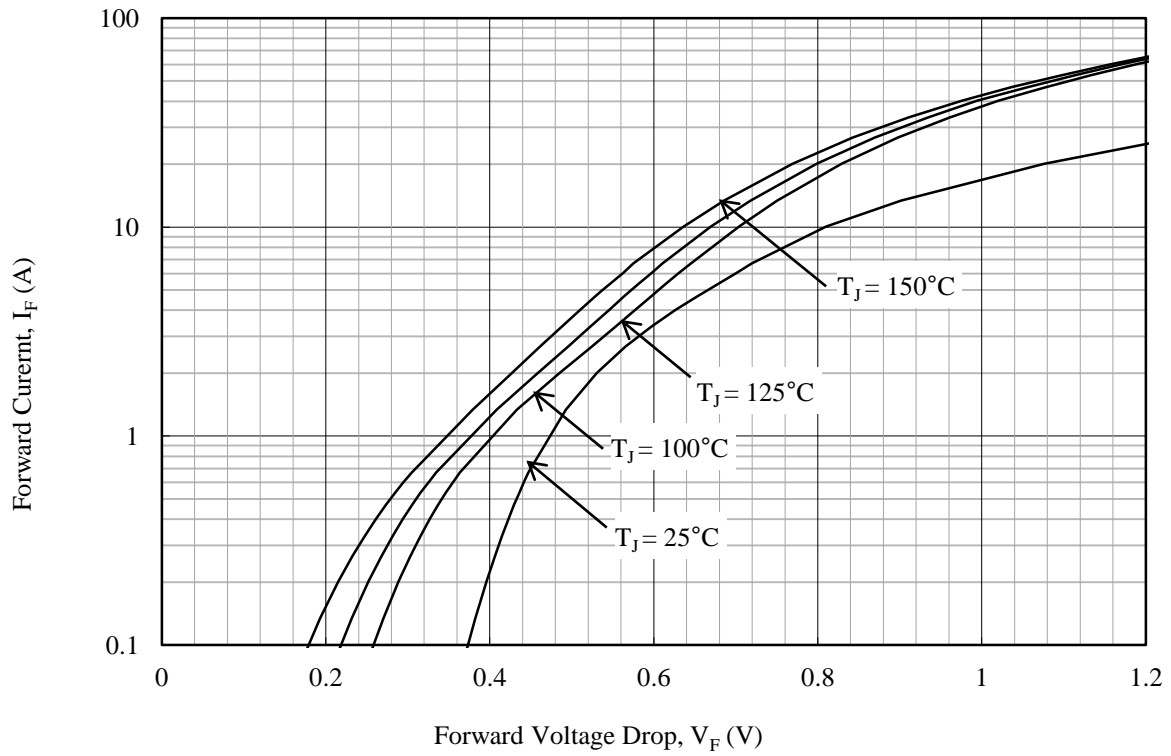


Figure 1 Typical Forward Characteristics

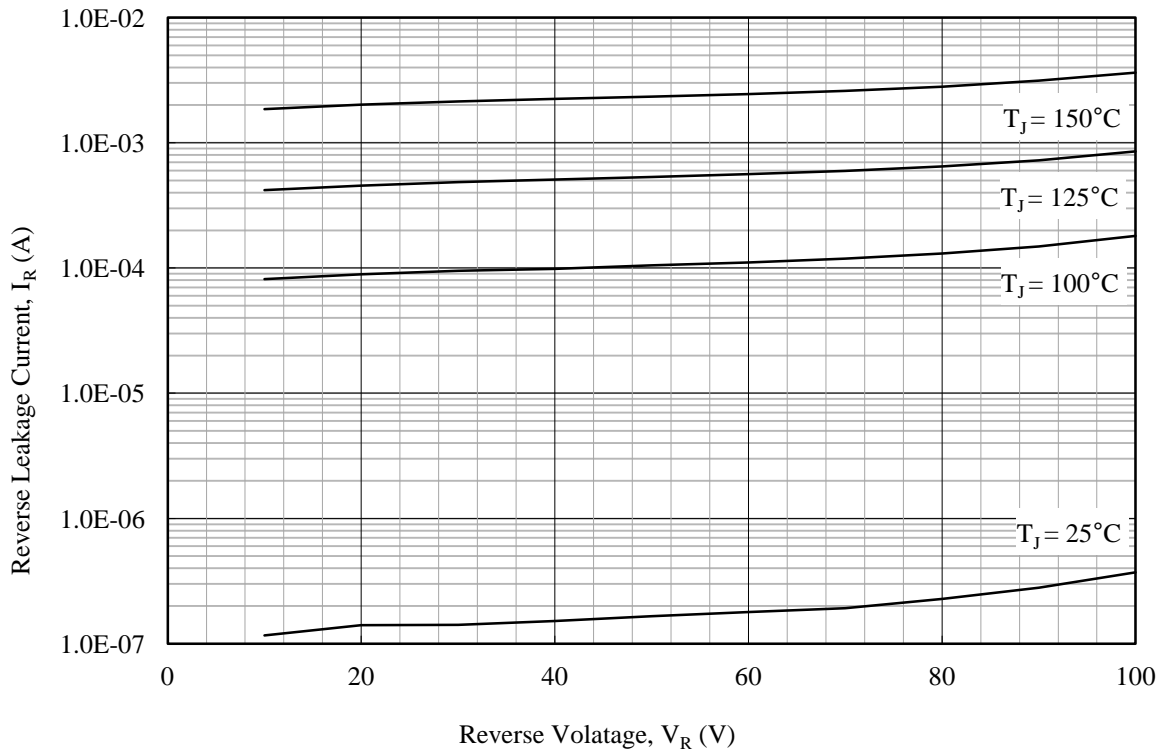


Figure 2 Typical Reverse Leakage Current Characteristics

Power Dissipation Curves

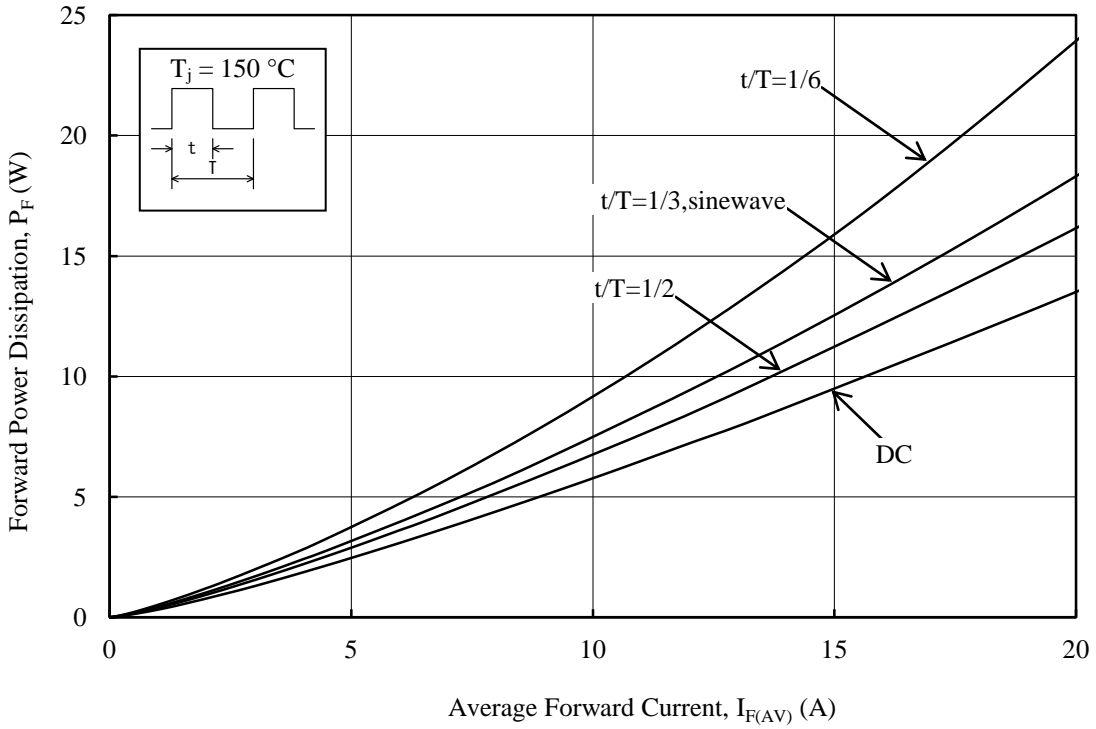


Figure 3 Forward Power Dissipation, P_F vs. Average Forward Current, $I_{F(AV)}$

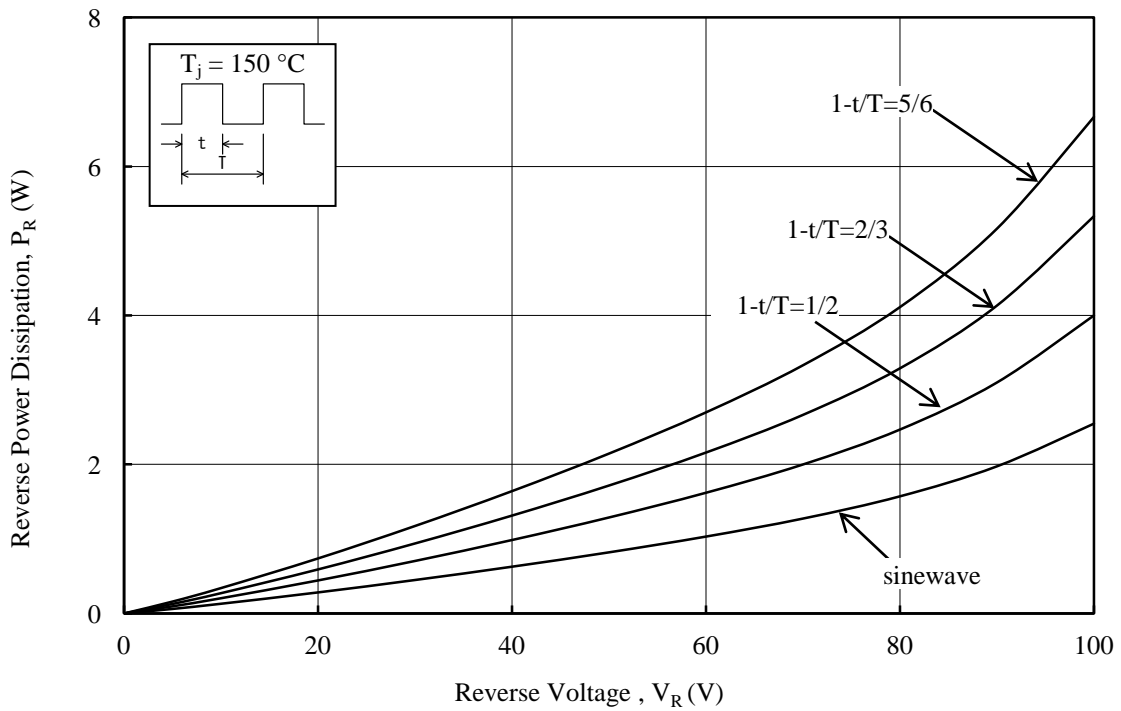


Figure 4 Reverse Power Dissipation, P_R vs. Reverse Voltage, V_R

Derating Curves

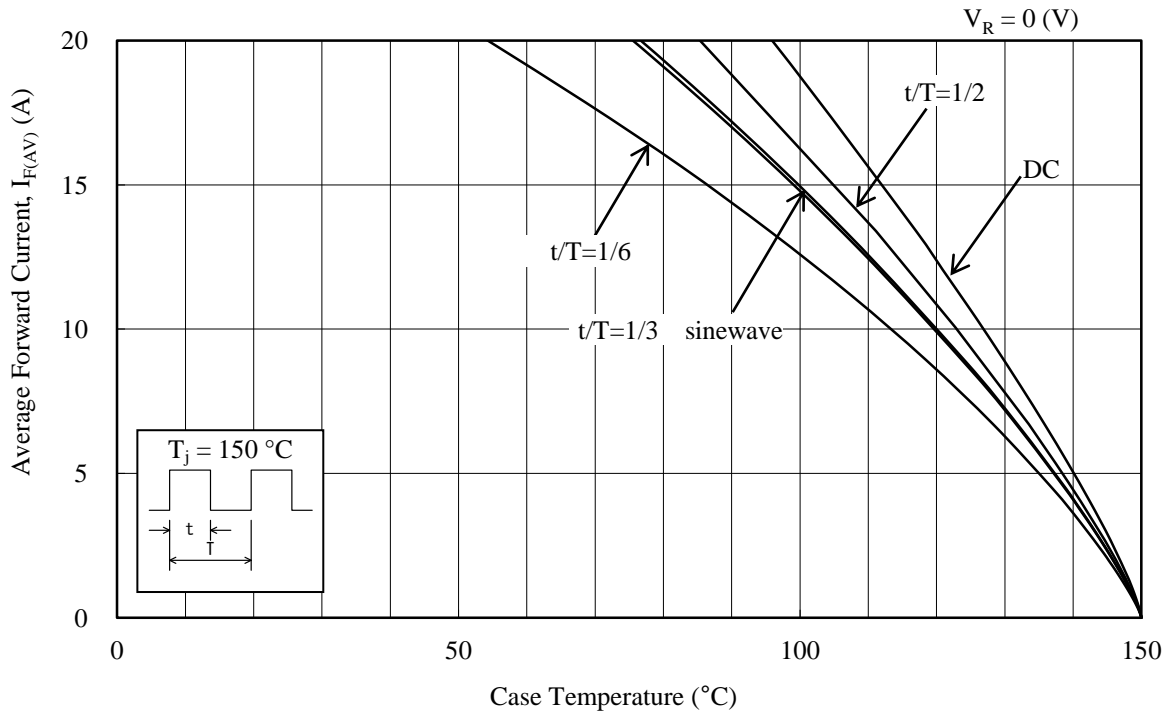


Figure 5 Average Rectified Forward Current, $I_{F(AV)}$ vs. Case Temperature

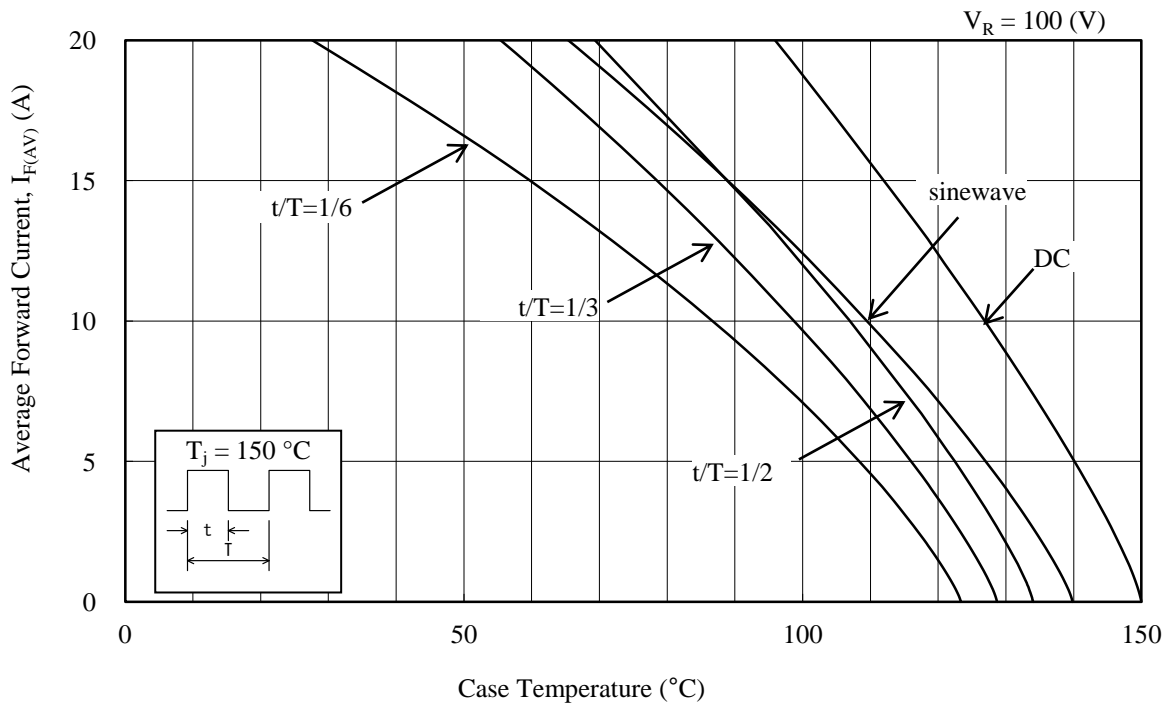
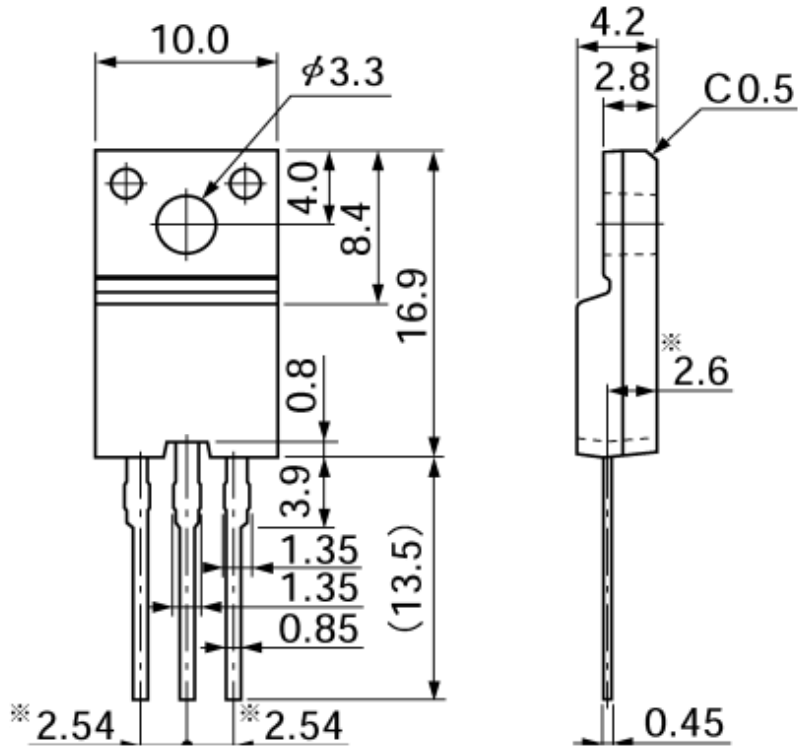


Figure 6 Average Rectified Forward Current, $I_{F(AV)}$ vs. Case Temperature

FMET-22010

Package Outline

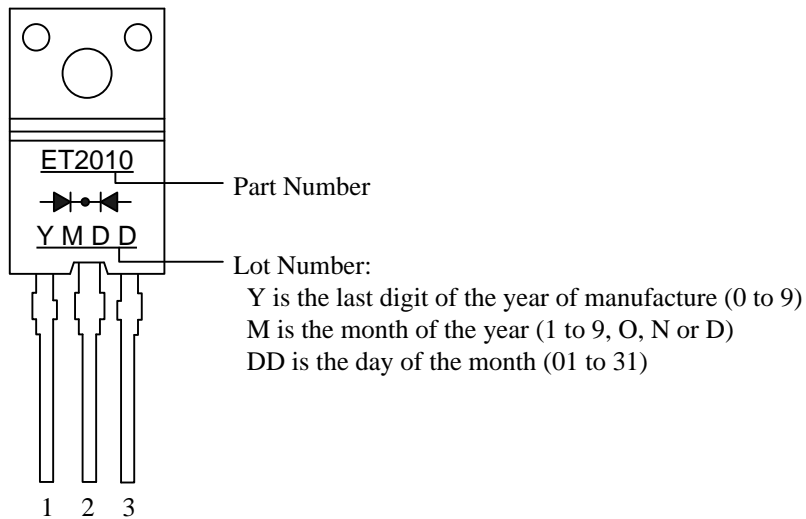
TO220F-3L



NOTES:

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

Marking Diagram



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