



MER1002FT

Super Fast Recovery Rectifier

Voltage 200 V **Current** 10 A

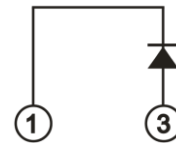
Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: ITO-220AC molded plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 1.5615 grams

ITO-220AC



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	200	V
Maximum RMS Voltage	V _{RMS}	140	V
Maximum DC Blocking Voltage	V _{DC}	200	V
Maximum Average Forward Current	I _{F(AV)}	10	A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	170	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V	C _J	100	pF
Typical Thermal Resistance	(Note 1) R _{θJC}	6	°C/W
	(Note 1) R _{θJL}	6.5	
Operating Junction Temperature Range	T _J	-55~175	°C
Storage Temperature Range	T _{STG}	-55~175	°C



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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V _F	I _F = 3 A, T _J = 25 °C	-	0.79	-	V
		I _F = 5 A, T _J = 25 °C	-	0.83	-	V
		I _F = 10 A, T _J = 25 °C	-	-	0.95	V
		I _F = 3 A, T _J = 125 °C	-	0.65	-	V
		I _F = 5 A, T _J = 125 °C	-	0.7	-	V
		I _F = 10 A, T _J = 125 °C	-	0.8	-	V
Reverse Current	I _R	V _R = 160 V, T _J = 25 °C	-	0.004	-	uA
		V _R = 200 V, T _J = 25 °C	-	-	1	
		V _R = 200 V, T _J = 125 °C	-	-	90	
Reverse Recovery Time	T _{RR}	I _F = 0.5 A, I _R = 1 A, I _{RR} = 0.25 A, T _J = 25 °C	-	-	35	ns
Reverse Recovery Time	T _{RR}	I _F = 10 A, V _R = 200 V	-	30	-	ns
Peak Recovery Current	I _{RRM}	di/dt = 300 A/uS	-	6.8	-	A
Reverse Recovery Charge	Q _{RR}	T _J = 25 °C	-	102	-	nC
Reverse Recovery Time	T _{RR}	I _F = 10 A, V _R = 200 V	-	47	-	ns
Peak Recovery Current	I _{RRM}	di/dt = 300A/uS	-	11	-	A
Reverse Recovery Charge	Q _{RR}	T _J = 125 °C	-	250	-	nC

NOTES :

1. Device mounted on a infinite heatsink.



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TYPICAL CHARACTERISTIC CURVES

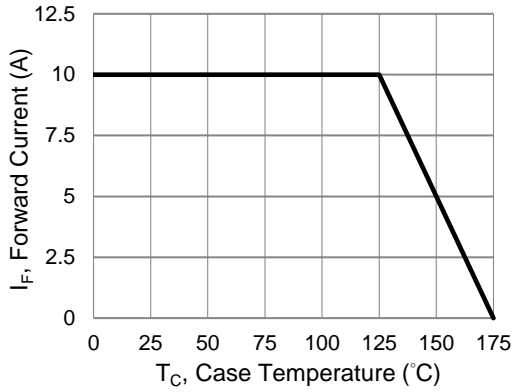


Fig.1 Forward Current Derating Curve

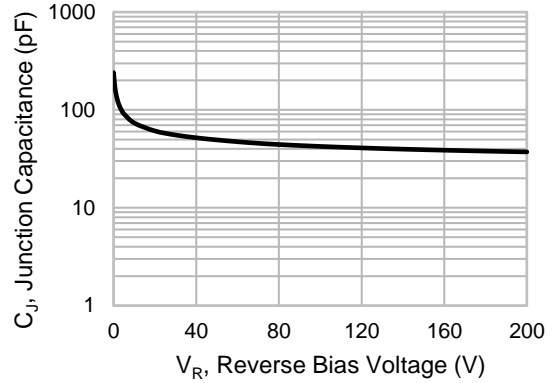


Fig.2 Typical Junction Capacitance

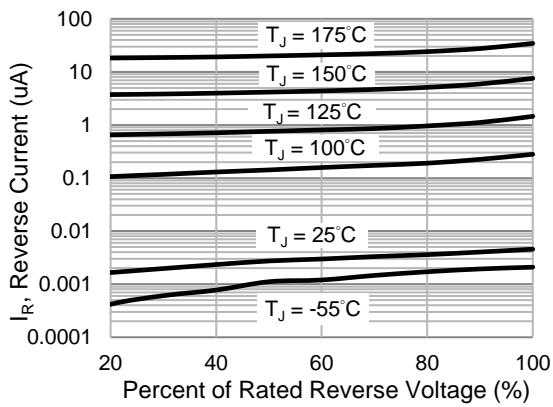


Fig.3 Typical Reverse Characteristics

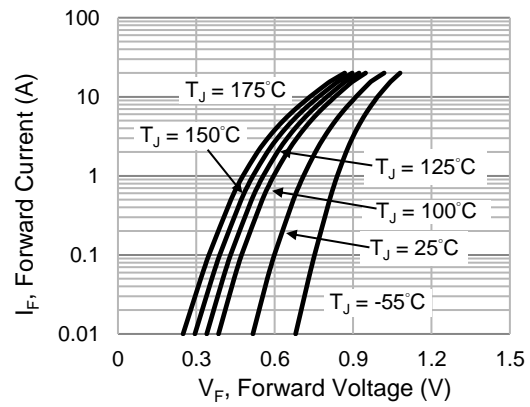


Fig.4 Typical Forward Characteristics

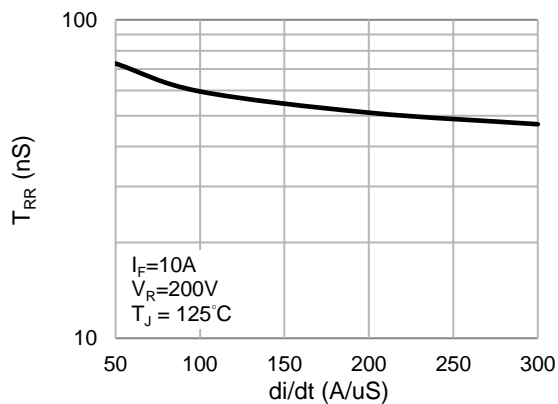


Fig.5 Typical Reverse Recovery Time Versus di/dt

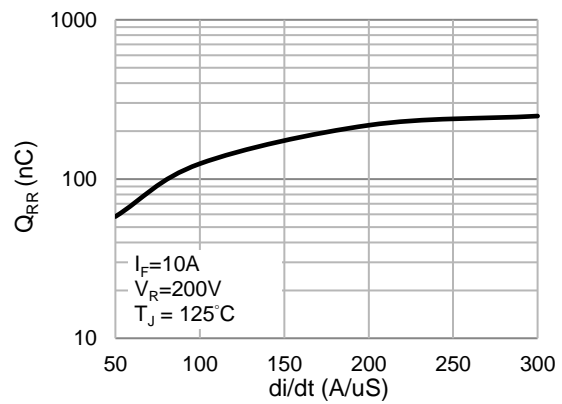


Fig.6 Typical Reverse Recovery Charge Versus di/dt

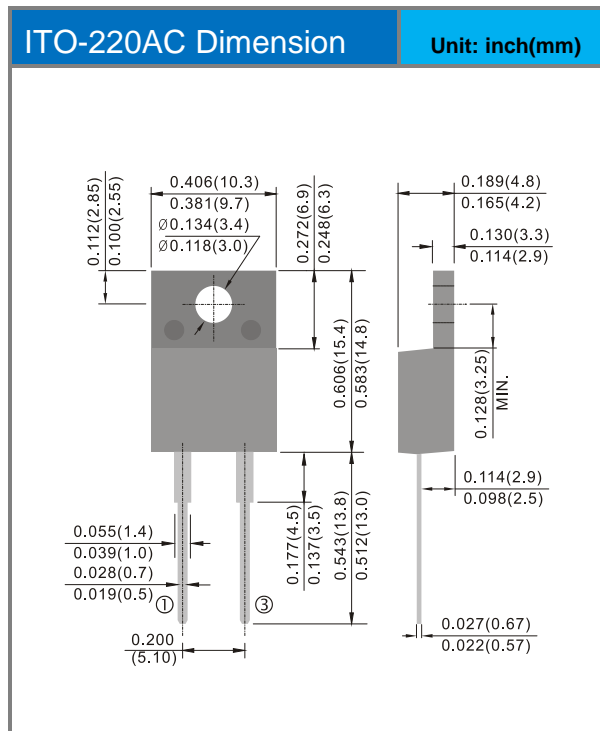


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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MER1002FT_T0_00601	ITO-220AC	50pcs / Tube	MER1002FT	Halogen free RoHS compliant

Packaging Information





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