

Electrical Characteristics (Per Leg) @ $T_J = 25^\circ\text{C}$ (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Test Conditions
V_{BR}	Cathode Anode Breakdown Voltage	1200	—	—	V	$I_R = 250\mu\text{A}$
V_F	Forward Voltage See Fig. 1	—	—	3.1	V	$I_F = 7.0\text{A}$, $T_J = -55^\circ\text{C}$
		—	—	3.3		$I_F = 7.0\text{A}$
		—	—	4.4		$I_F = 15\text{A}$
		—	—	2.8		$I_F = 7.0\text{A}$, $T_J = 125^\circ\text{C}$
I_R	Max Reverse Leakage Current See Fig. 2	—	—	10	μA	$V_R = V_R$ Rated
		—	—	1.0	mA	$V_R = 960\text{V}$, $T_J = 125^\circ\text{C}$
C_T	Junction Capacitance, See Fig. 3	—	10	15	pF	$V_R = 200\text{V}$
L_S	Series Inductance	—	8.7	—	nH	Measured from anode lead to cathode lead, 6mm (0.025 in) from package

Dynamic Recovery Characteristics (Per Leg) @ $T_J = 25^\circ\text{C}$ (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Test Conditions
t_{rr1}	Reverse Recovery Time	—	58	100	ns	$T_J = 25^\circ\text{C}$ See Fig.
t_{rr2}		—	110	165		$T_J = 125^\circ\text{C}$ 5
I_{RRM1}	Peak Recovery Current	—	5.4	8.1	A	$T_J = 25^\circ\text{C}$ See Fig.
I_{RRM2}		—	7.2	10.8		$T_J = 125^\circ\text{C}$ 6
Q_{rr1}	Reverse Recovery Charge	—	185	370	nC	$T_J = 25^\circ\text{C}$ See Fig.
Q_{rr2}		—	395	590		$T_J = 125^\circ\text{C}$ 7
$di_{(rec)M}/dt1$	Peak Rate of Fall of Recovery Current	—	255	380	$\text{A}/\mu\text{s}$	$T_J = 25^\circ\text{C}$ See Fig.
$di_{(rec)M}/dt2$	During t_b	—	160	240		$T_J = 125^\circ\text{C}$ 8

Thermal - Mechanical Characteristics

	Parameter	Typ.	Max.	Units
R_{thJC}	Junction-to-Case, Single Leg Conducting	—	2.0	$^\circ\text{C}/\text{W}$
Wt	Weight	9.3	—	g

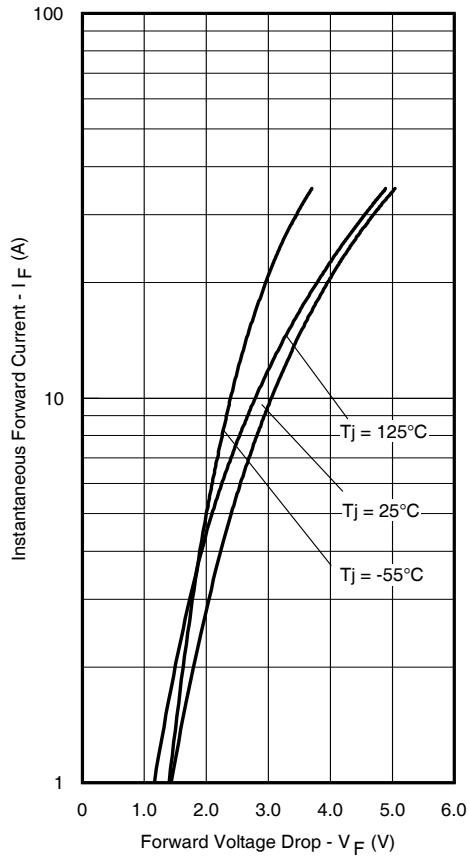


Fig. 1 - Typical Forward Voltage Drop Vs. Instantaneous Forward Current (Per Leg)

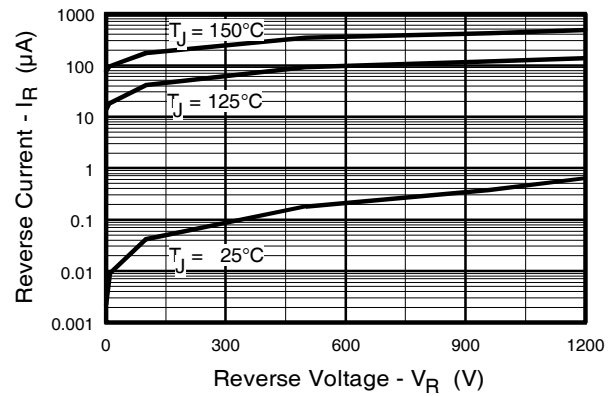


Fig. 2 - Typical Reverse Current Vs. Reverse Voltage (Per Leg)

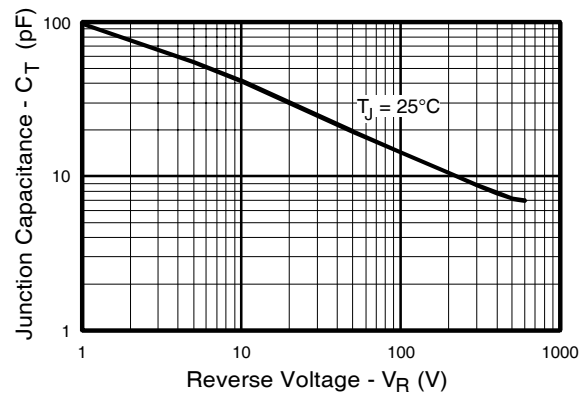


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

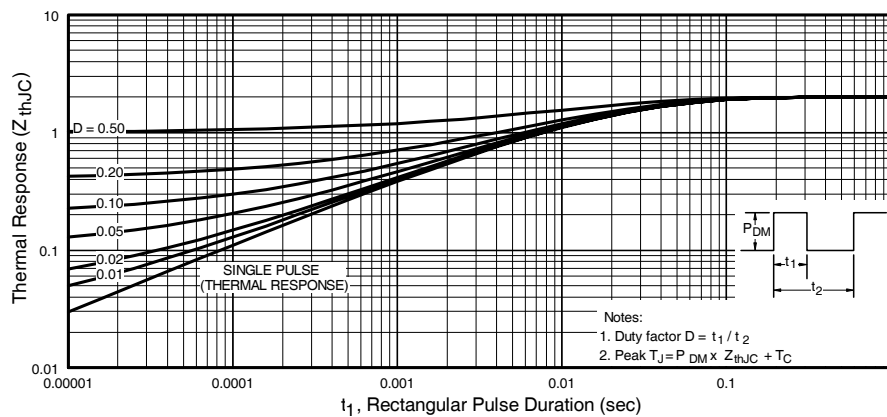
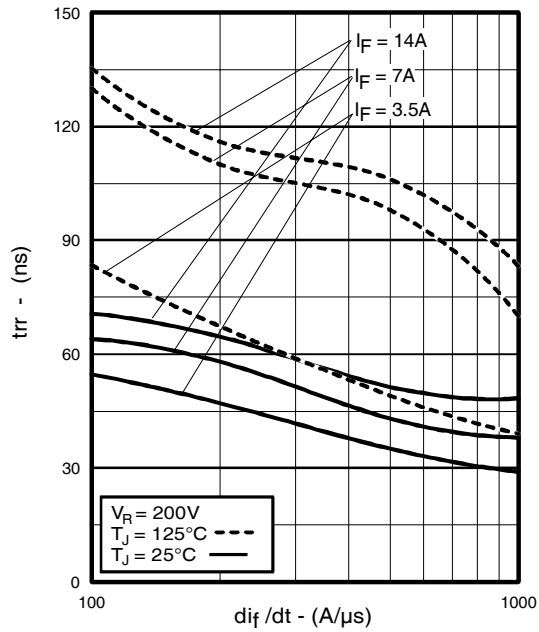
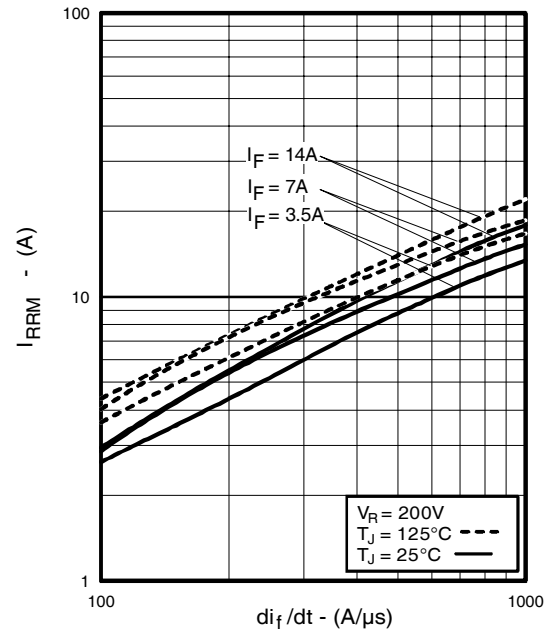
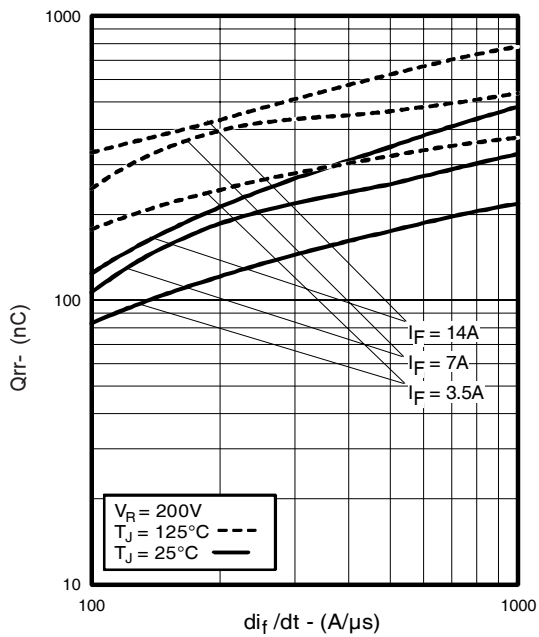
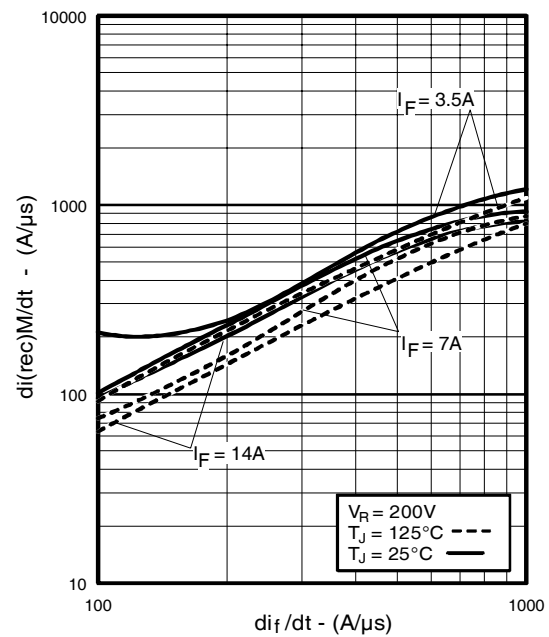


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics (Per Leg)

Fig. 5 - Typical Reverse Recovery vs. di_f/dt Fig. 6 - Typical Recovery Current vs. di_f/dt Fig. 7 - Typical Stored Charge vs. di_f/dt Fig. 8 - Typical $di_{(rec)M}/dt$ vs. di_f/dt

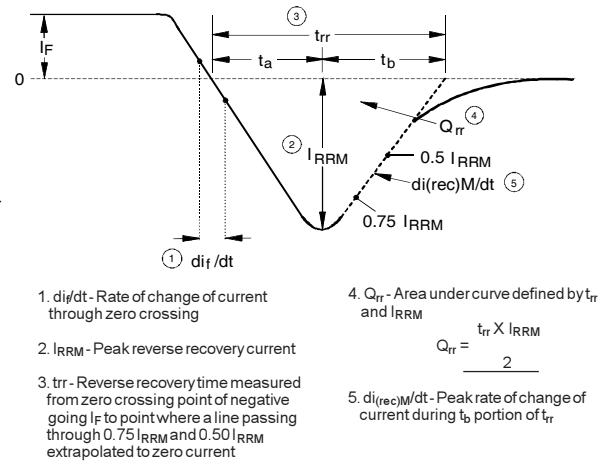
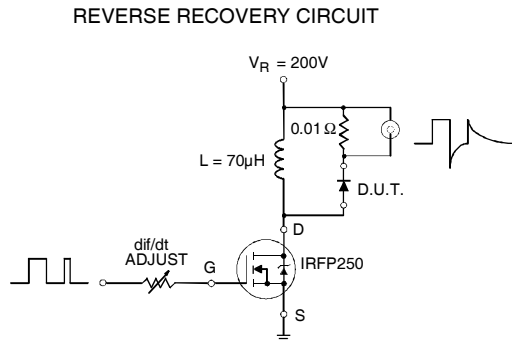
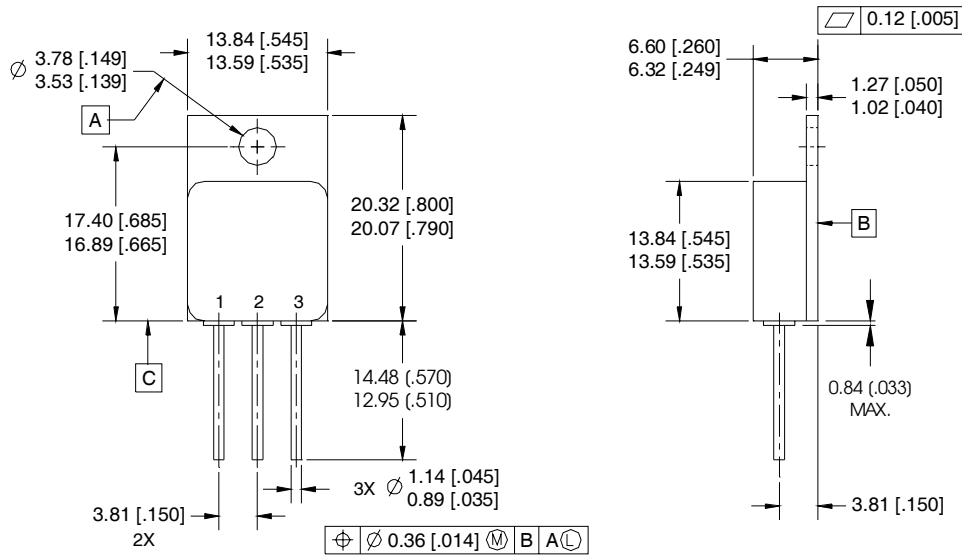


Fig. 9 - Reverse Recovery Parameter Test Circuit

Fig. 10 - Reverse Recovery Waveform and Definitions

Case Outline and Dimensions — TO-254AA



NOTES:

1. DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (INCHES).
3. CONTROLLING DIMENSION: INCH.
4. CONFORMS TO JEDEC OUTLINE TO-254AA.

PIN ASSIGNMENTS

- 1 = ANODE 1
- 2 = COMMON CATHODE
- 3 = ANODE 2