

ELECTRICAL SPECIFICATIONS ($T_J = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Cathode to anode breakdown voltage	V_{BR}	$I_R = 100\text{ }\mu\text{A}$	600	-	-	V
Maximum forward voltage	V_{FM}	$I_F = 8.0\text{ A}$	-	1.4	1.7	
		$I_F = 16\text{ A}$	-	1.7	2.1	
		$I_F = 8.0\text{ A}, T_J = 125\text{ }^{\circ}\text{C}$	-	1.4	1.7	
Maximum reverse leakage current	I_{RM}	$V_R = V_R\text{ rated}$	-	0.3	5.0	μA
		$T_J = 125\text{ }^{\circ}\text{C}, V_R = 0.8 \times V_R\text{ rated}$	-	100	500	
Junction capacitance	C_T	$V_R = 200\text{ V}$	-	10	25	pF
Series inductance	L_S	Measured lead to lead 5 mm from package body	-	8.0	-	nH

DYNAMIC RECOVERY CHARACTERISTICS ($T_J = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse recovery time	t_{rr}	$I_F = 1.0\text{ A}, dI_F/dt = 200\text{ A}/\mu\text{s}, V_R = 30\text{ V}$	-	18	-	ns
	t_{rr1}	$T_J = 25\text{ }^{\circ}\text{C}$	-	37	55	
	t_{rr2}	$T_J = 125\text{ }^{\circ}\text{C}$	-	55	90	
Peak recovery current	I_{RRM1}	$T_J = 25\text{ }^{\circ}\text{C}$	-	3.5	5.0	A
	I_{RRM2}	$T_J = 125\text{ }^{\circ}\text{C}$	-	4.5	8.0	
Reverse recovery charge	Q_{rr1}	$T_J = 25\text{ }^{\circ}\text{C}$	-	65	138	nC
	Q_{rr2}	$T_J = 125\text{ }^{\circ}\text{C}$	-	124	360	
Peak rate of fall of recovery current during t_b	$dI_{(rec)M}/dt1$	$T_J = 25\text{ }^{\circ}\text{C}$	-	240	-	A/ μs
	$dI_{(rec)M}/dt2$	$T_J = 125\text{ }^{\circ}\text{C}$	-	210	-	

THERMAL - MECHANICAL SPECIFICATIONS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Lead temperature	T_{lead}	0.063" from case (1.6 mm) for 10 s	-	-	300	$^{\circ}\text{C}$
Thermal resistance, junction to case	R_{thJC}		-	-	3.5	K/W
Thermal resistance, junction to ambient	R_{thJA}	Typical socket mount	-	-	80	
Thermal resistance, case to heatsink	R_{thCS}	Mounting surface, flat, smooth and greased	-	0.5	-	
Weight			-	2.0	-	g
			-	0.07	-	oz.
Mounting torque			6.0 (5.0)	-	12 (10)	kgf · cm (lbf · in)
Marking device		Case style TO-220AC	HFA08TB60			

HEXFRED® Ultrafast Soft Recovery Diode, 8 A

Vishay High Power Products

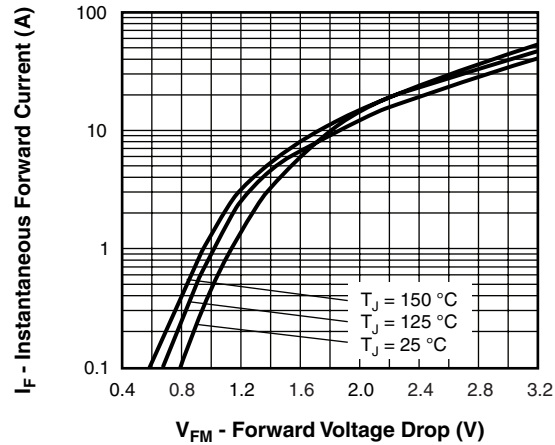


Fig. 1 - Maximum Forward Voltage Drop vs. Instantaneous Forward Current

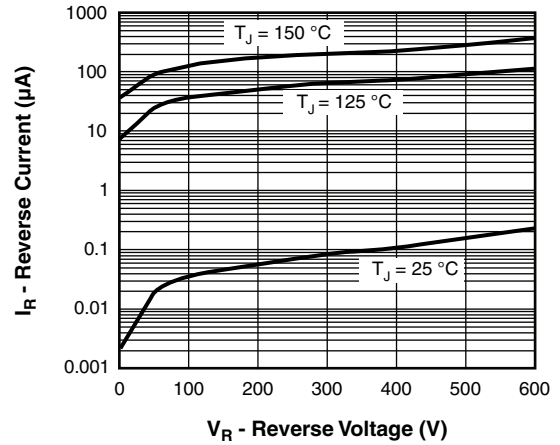


Fig. 2 - Typical Reverse Current vs. Reverse Voltage

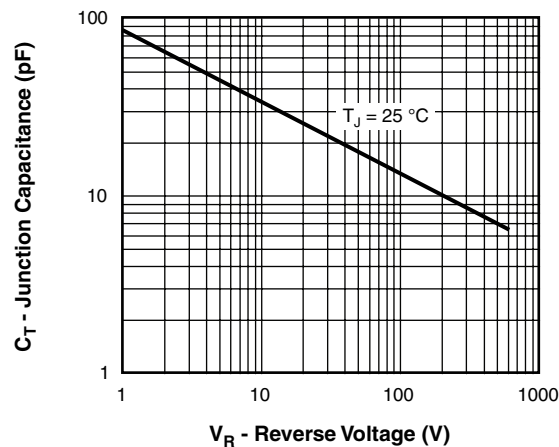
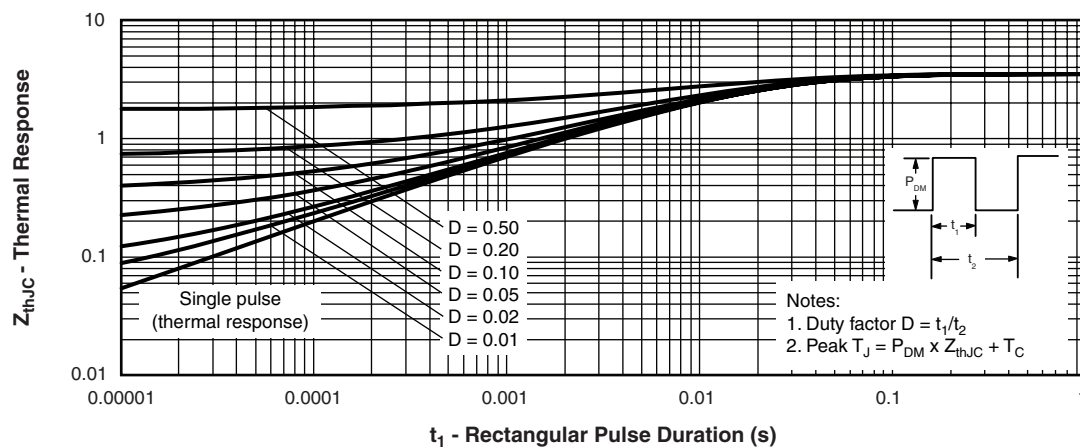
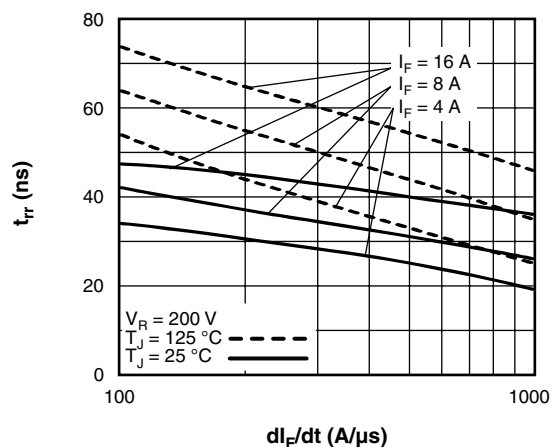
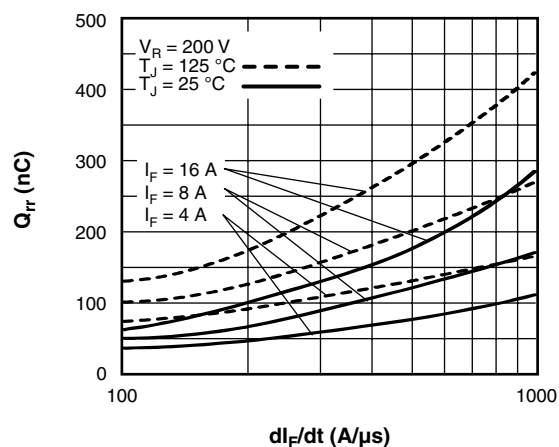
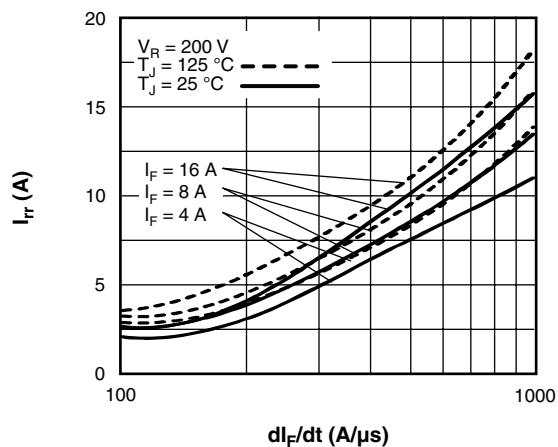
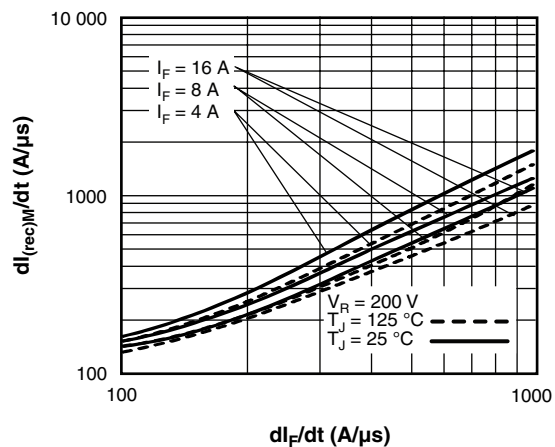


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage


 Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics

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

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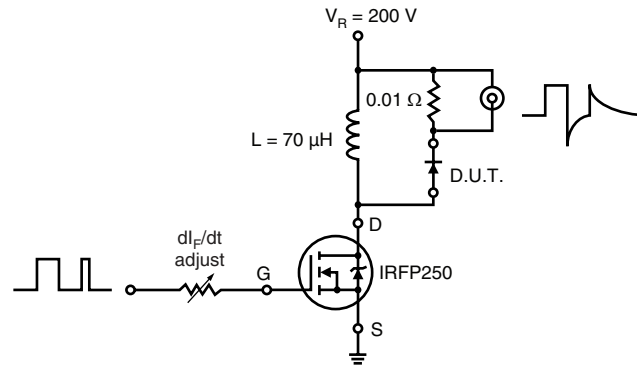


Fig. 9 - Reverse Recovery Parameter Test Circuit

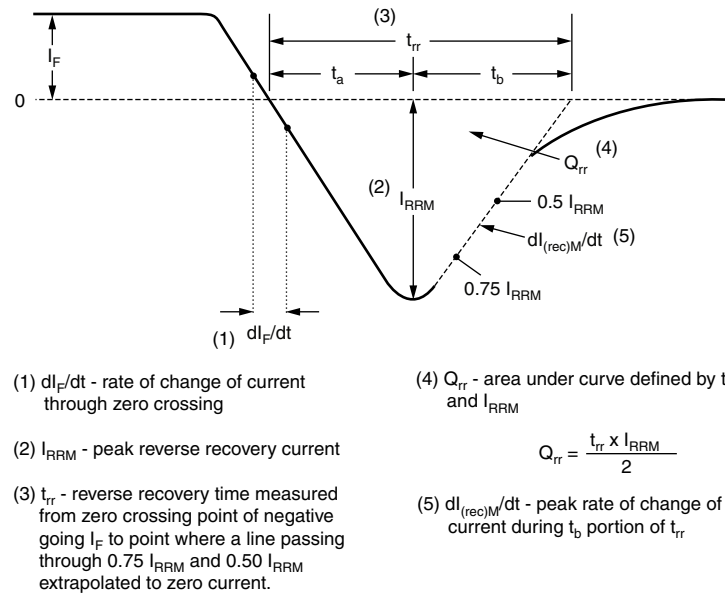


Fig. 10 - Reverse Recovery Waveform and Definitions

LINKS TO RELATED DOCUMENTS	
Dimensions	http://www.vishay.com/doc?95221
Part marking information	http://www.vishay.com/doc?95224



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