

ELECTRICAL SPECIFICATIONS (T _J = 25 °C unless otherwise specified)						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Cathode to anode breakdown voltage	V _{BR}	I _R = 100 µA	1200	-	-	V
Maximum forward voltage	V _{FM}	I _F = 6.0 A	-	2.7	3.0	
		I _F = 12 A	-	3.5	3.9	
		I _F = 6.0 A, T _J = 125 °C	-	2.4	2.8	
Maximum reverse leakage current	I _{RM}	V _R = V _R rated	-	0.26	5.0	µA
		T _J = 125 °C, V _R = 0.8 x V _R rated	-	110	500	
Junction capacitance	C _T	V _R = 200 V	-	9.0	14	pF
Series inductance	L _S	Measured lead to lead 5 mm from package body	-	8.0	-	nH

DYNAMIC RECOVERY CHARACTERISTICS (T _J = 25 °C unless otherwise specified)						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse recovery time	t _{rr}	I _F = 1.0 A, dI _F /dt = 200 A/µs, V _R = 30 V	-	26	-	ns
	t _{rr1}	T _J = 25 °C	-	53	80	
	t _{rr2}	T _J = 125 °C	-	87	130	
Peak recovery current	I _{RRM1}	T _J = 25 °C	-	4.4	8.0	A
	I _{RRM2}	T _J = 125 °C	-	5.0	9.0	
Reverse recovery charge	Q _{rr1}	T _J = 25 °C	-	116	320	nC
	Q _{rr2}	T _J = 125 °C	-	233	585	
Peak rate of recovery current during t _b	dI _(rec) /dt1	T _J = 25 °C	-	180	-	A/µs
	dI _(rec) /dt2	T _J = 125 °C	-	100	-	

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	°C
Thermal resistance, junction to case	R _{thJC}		-	-	2.0	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	HFA06TB120			

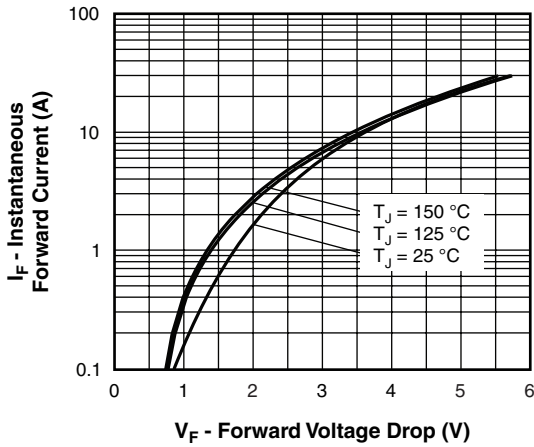


Fig. 1 - Typical Forward Voltage Drop Characteristics

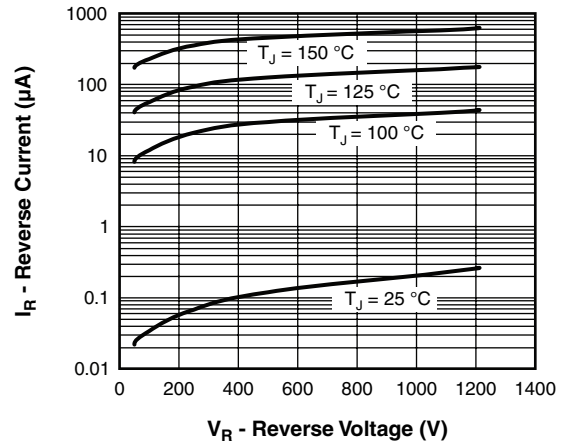


Fig. 2 - Typical Reverse Current vs. Reverse Voltage

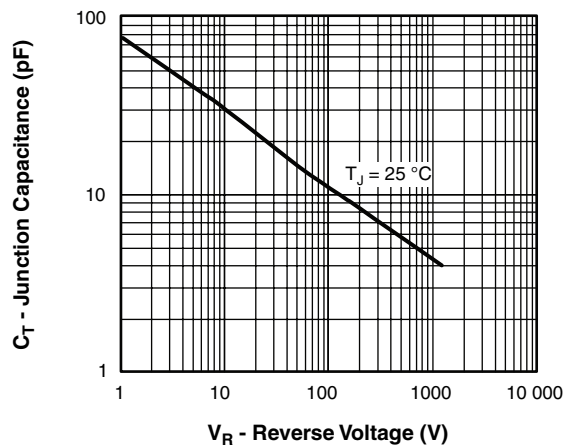


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

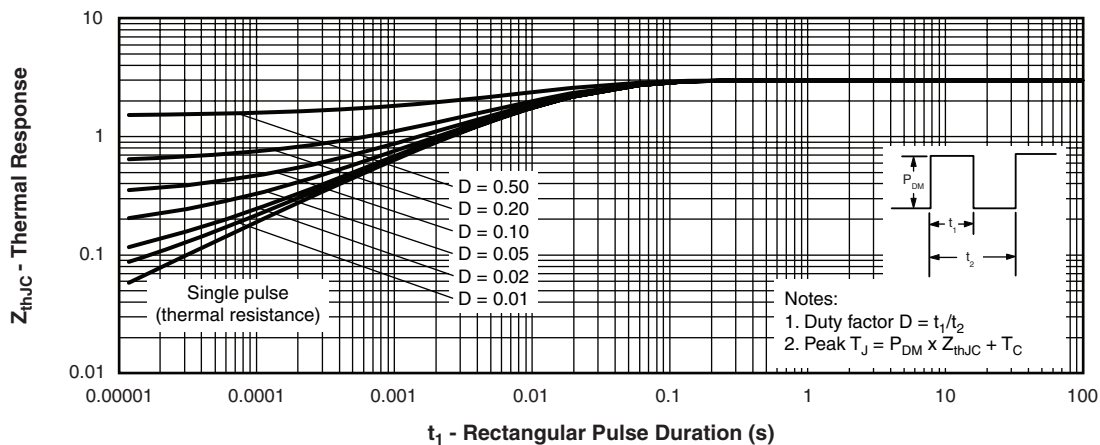
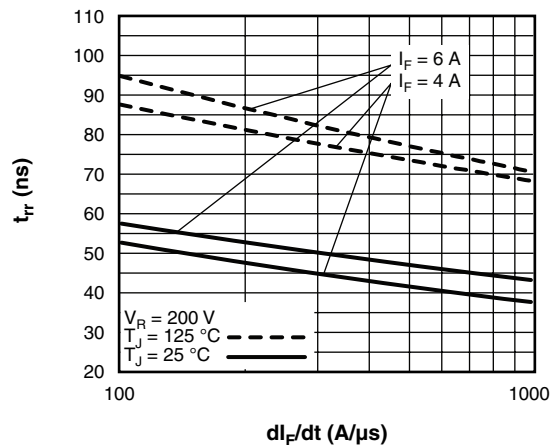
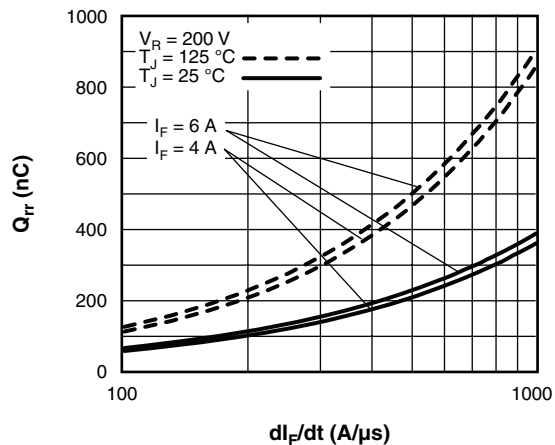
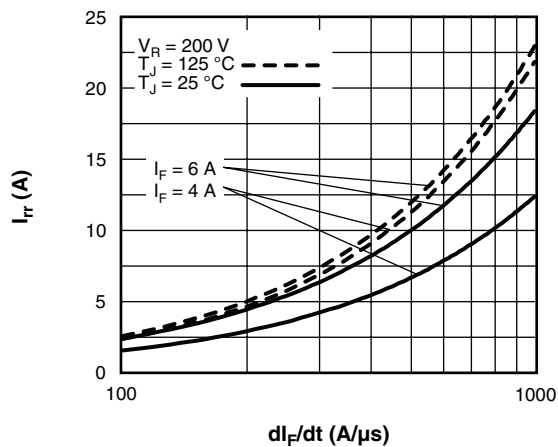
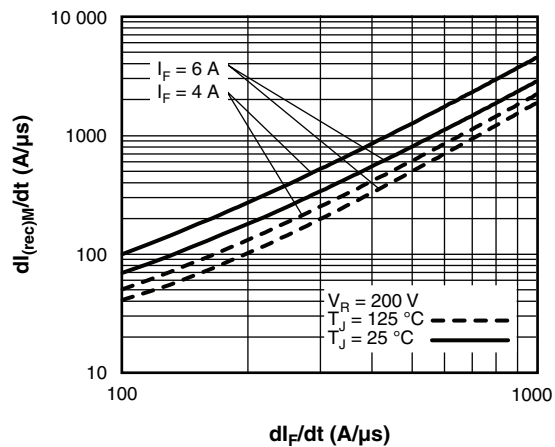


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics

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

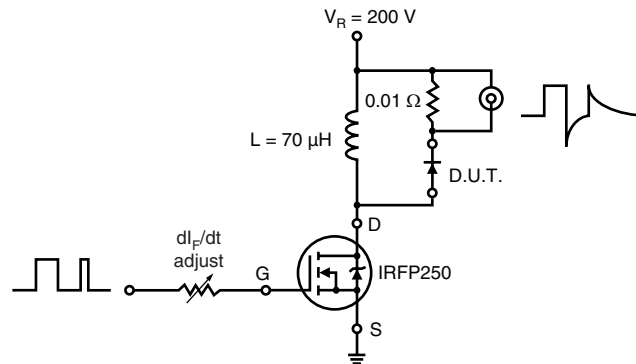


Fig. 9 - Reverse Recovery Parameter Test Circuit

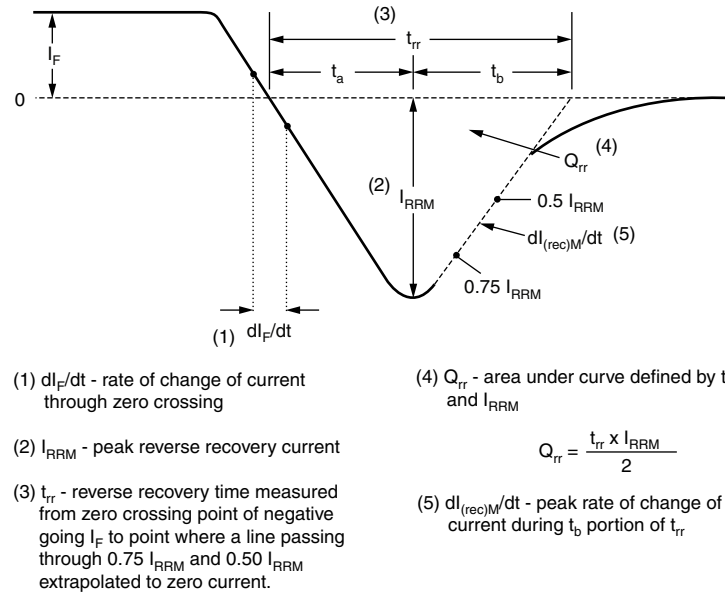


Fig. 10 - Reverse Recovery Waveform and Definitions

ORDERING INFORMATION TABLE

Device code	HF	A	06	TB	120	PbF
	1	2	3	4	5	6

- | | | |
|---|---|--|
| 1 | - | HEXFRED® family |
| 2 | - | Process designator:
A = subs. elec. irradi.
B = subs. platinum |
| 3 | - | Current rating (06 = 6 A) |
| 4 | - | Package outline (TB = TO-220 2 lead) |
| 5 | - | Voltage rating (120 = 1200 V) |
| 6 | - | • None = Standard production
• PbF = Lead (Pb)-free |

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



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