DYNAMIC RECOVERY CHARACTERISTICS (T_C = 25 °C unless otherwise specified)							
PARAMETER	**SYMBOL**	**TEST CONDITIONS**		**MIN.**	**TYP.**	**MAX.**	**UNITS**
Reverse recovery time	t_{rr}	I_F = 1 A, dI_F/dt = 100 A/µs, V_R = 30 V		-	60	120	ns
		I_F = 15 A, dI_F/dt = 100 A/µs, V_R = 30 V		-	190	270	
		T_J = 25 °C	I_F = 15 A dI_F/dt = 200 A/µs V_R = 390 V	-	220	-	
		T_J = 125 °C		-	320	-	
Peak recovery current	I_{RRM}	T_J = 25 °C		-	19	-	A
		T_J = 125 °C		-	26	-	
Reverse recovery charge	Q_{rr}	T_J = 25 °C		-	2.2	-	µC
		T_J = 125 °C		-	4.3	-	

THERMAL - MECHANICAL SPECIFICATIONS						
PARAMETER	**SYMBOL**	**TEST CONDITIONS**	**MIN.**	**TYP.**	**MAX.**	**UNITS**
Maximum junction and storage temperature range	T_J, T_{Stg}		- 65	-	175	°C
Thermal resistance, junction to case	R_{thJC}		-	1.0	1.3	°C/W
(FULL-PAK)			-	3.0	3.5	
Thermal resistance, junction to ambient per leg	R_{thJA}	Typical socket mount	-	-	70	
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	15ETL06			
		Case style TO-220AC FULL-PAK	15ETL06FP			

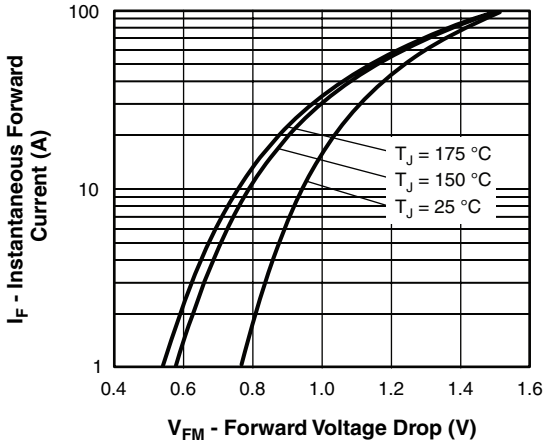


Fig. 1 - Maximum Forward Voltage Drop Characteristics

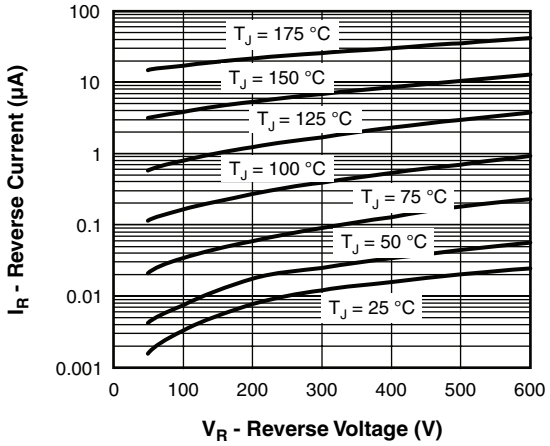


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage

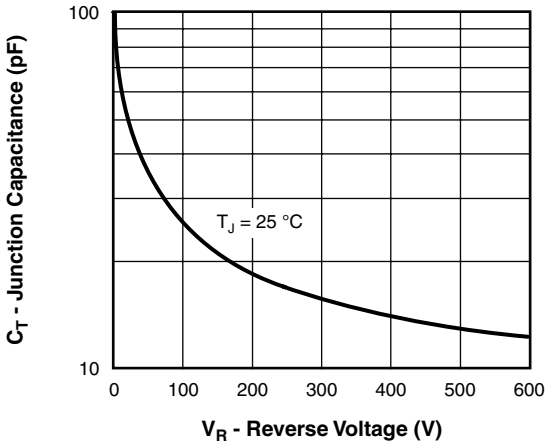


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

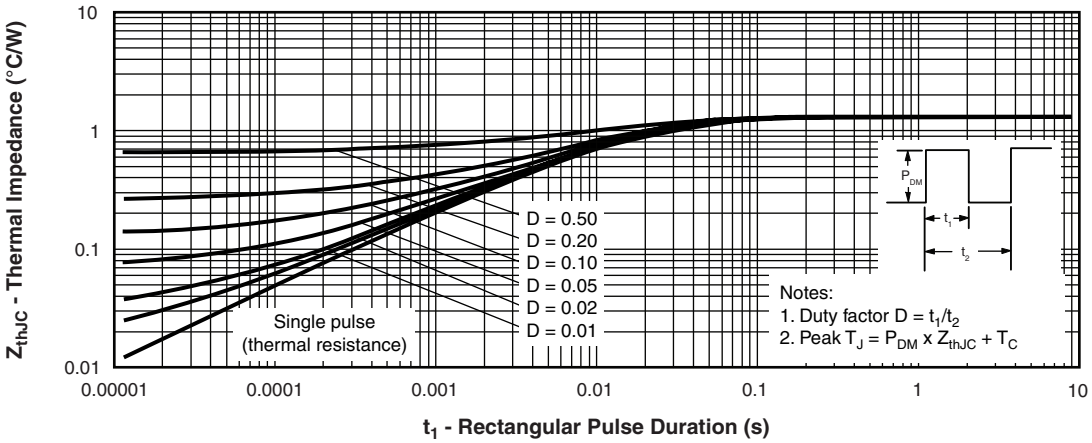


Fig. 4 - Maximum Thermal Impedance Z_{thJC} Characteristics

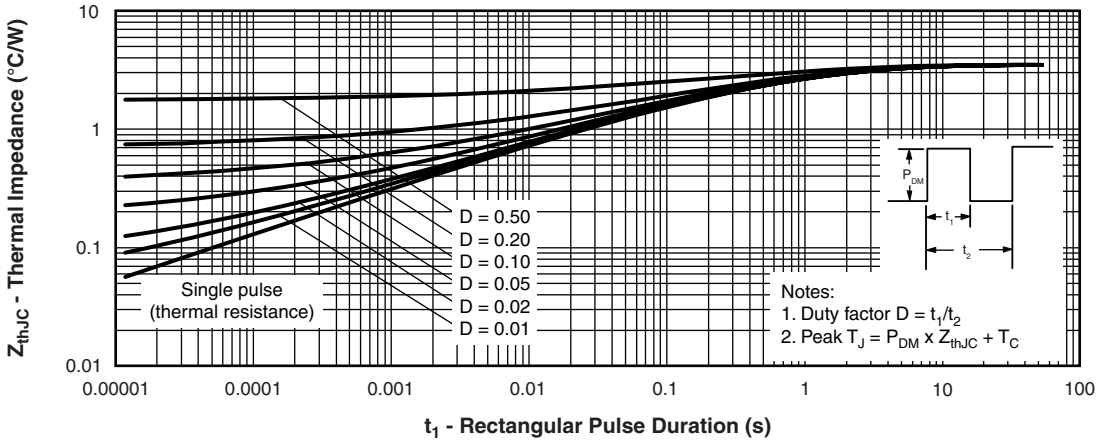


Fig. 5 - Maximum Thermal Impedance Z_{thJC} Characteristics (FULL-PAK)

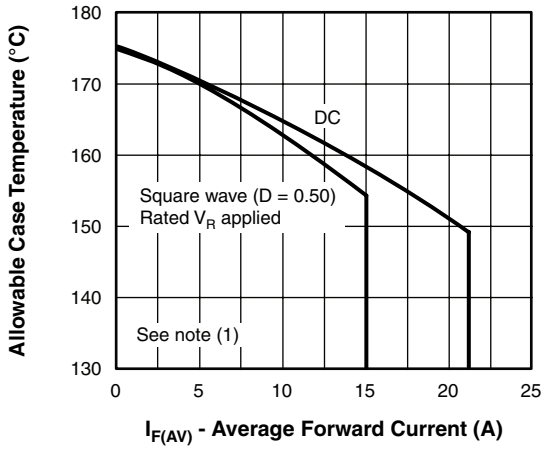


Fig. 6 - Maximum Allowable Case Temperature vs. Average Forward Current

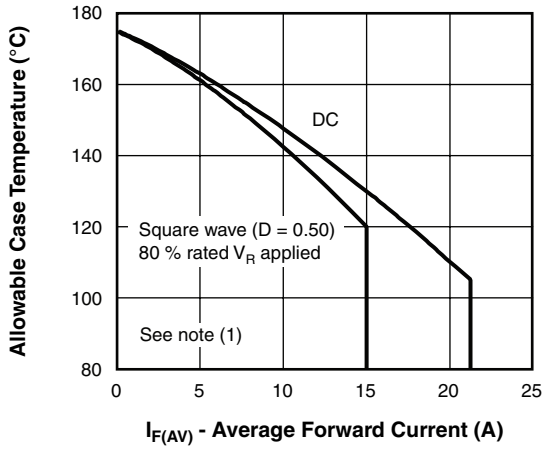


Fig. 7 - Maximum Allowable Case Temperature vs. Average Forward Current (FULL-PAK)

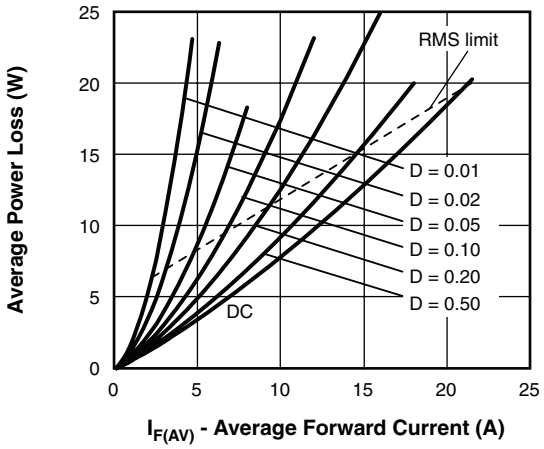


Fig. 8 - Forward Power Loss Characteristics

Note

(1) Formula used: $T_C = T_J - (Pd + Pd_{REV}) \times R_{thJC}$;
Pd = Forward power loss = $I_{F(AV)} \times V_{FM}$ at ($I_{F(AV)}$/D) (see fig. 8);
Pd_{REV} = Inverse power loss = $V_{R1} \times I_R$ (1 - D); I_R at V_{R1} = Rated V_R

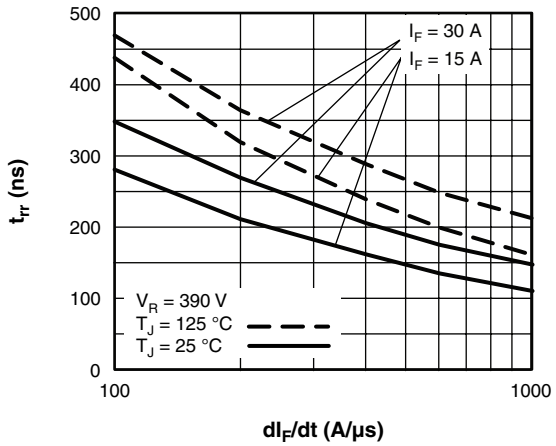


Fig. 9 - Typical Reverse Recovery Time vs. dI_F/dt

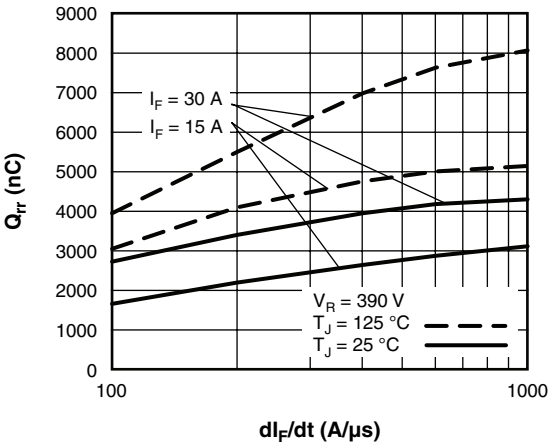


Fig. 10 - Typical Stored Charge vs. dI_F/dt

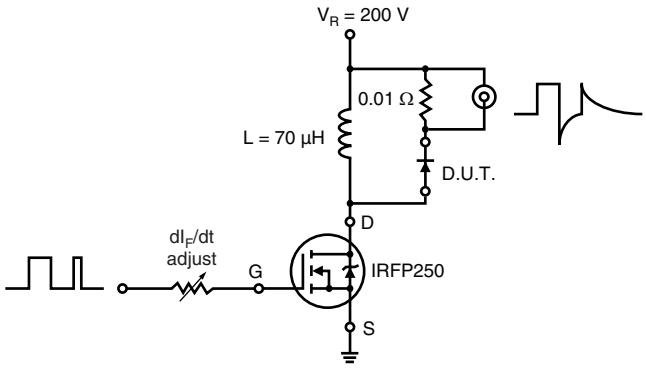
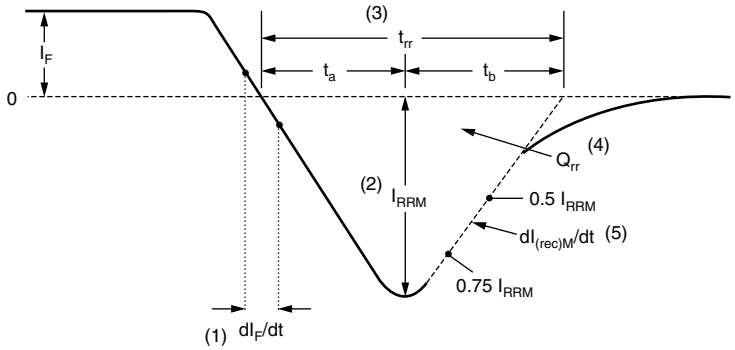


Fig. 11 - Reverse Recovery Parameter Test Circuit



(1) dI_F/dt - rate of change of current through zero crossing

(2) I_{RRM} - peak reverse recovery current

(3) t_{rr} - reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through 0.75 I_{RRM} and 0.50 I_{RRM} extrapolated to zero current.

(4) Q_{rr} - area under curve defined by t_{rr} and I_{RRM}

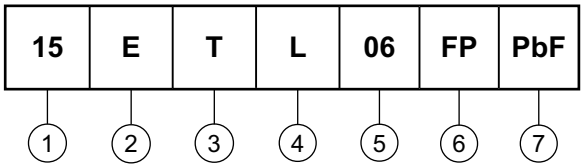
$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$

(5) $dI_{(rec)M}/dt$ - peak rate of change of current during t_b portion of t_{rr}

Fig. 12 - Reverse Recovery Waveform and Definitions

ORDERING INFORMATION TABLE

Device code



1	-	Current rating (15 = 15 A)
2	-	E = Single diode
3	-	T = TO-220, D^2PAK
4	-	L = Ultralow V_F hyperfast recovery
5	-	Voltage rating (06 = 600 V)
6	-	• None = TO-220AC • FP = TO-220 FULL-PAK
7	-	• None = Standard production • PbF = Lead (Pb)-free

Tube standard pack quantity: 50 pieces

LINKS TO RELATED DOCUMENTS	
Dimensions	www.vishay.com/doc?95039
Part marking information	www.vishay.com/doc?95045
SPICE model	www.vishay.com/doc?95270

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