

20ETF.. Soft Recovery Series

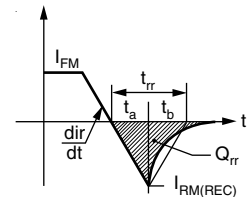
Vishay High Power Products

Fast Soft Recovery
Rectifier Diode, 20 A



ELECTRICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop	V _{FM}	20 A, T _J = 25 °C		1.31	V
Forward slope resistance	r _t	T _J = 150 °C		11.88	mΩ
Threshold voltage	V _{F(TO)}			0.93	V
Maximum reverse leakage current	I _{RM}	T _J = 25 °C	V _R = Rated V _{RRM}	0.1	mA
		T _J = 150 °C		6	

RECOVERY CHARACTERISTICS				
PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Reverse recovery time	t_{rr}	I_F at 20 Apk 25 A/ μs 25 $^{\circ}\text{C}$	400	ns
Reverse recovery current	I_{rr}		6.1	A
Reverse recovery charge	Q_{rr}		1.7	μC
Snap factor	S		0.6	



THERMAL - MECHANICAL SPECIFICATIONS					
PARAMETER		SYMBOL	TEST CONDITIONS	VALUES	UNITS
Maximum junction and storage temperature range		T _J , T _{Stg}		- 40 to 150	°C
Maximum thermal resistance, junction to case		R _{thJC}	DC operation	0.9	°C/W
Maximum thermal resistance, junction to ambient		R _{thJA}		62	
Typical thermal resistance, case to heatsink		R _{thCS}	Mounting surface, smooth and greased	0.5	
Approximate weight				2	g
				0.07	oz.
Mounting torque	minimum			6 (5)	kgf · cm (lbf · in)
	maximum			12 (10)	
Marking device		Case style TO-220AC	20ETF08		
			20ETF10		
			20ETF12		



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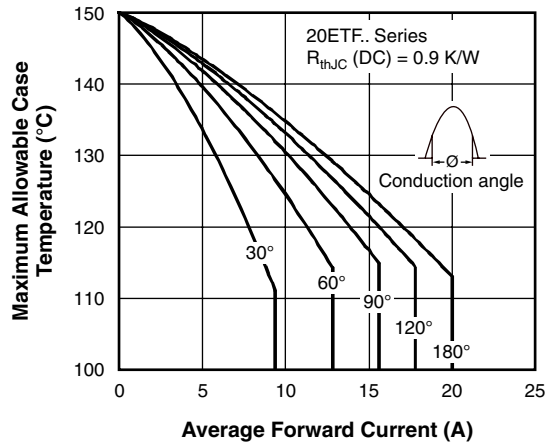


Fig. 1 - Current Rating Characteristics

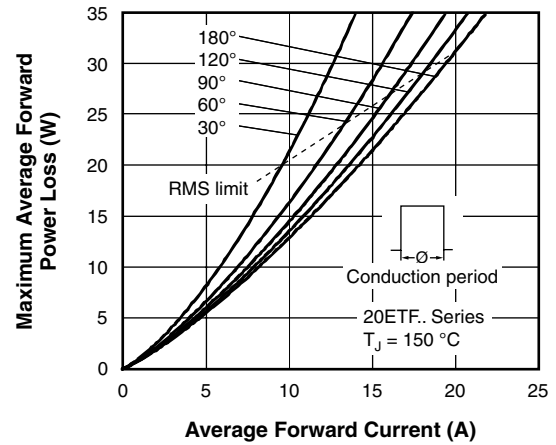


Fig. 4 - Forward Power Loss Characteristics

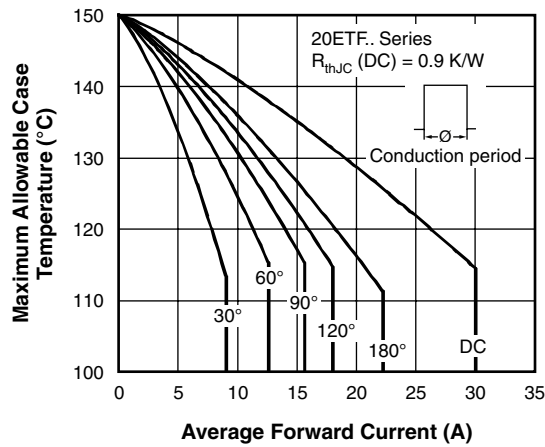


Fig. 2 - Current Rating Characteristics

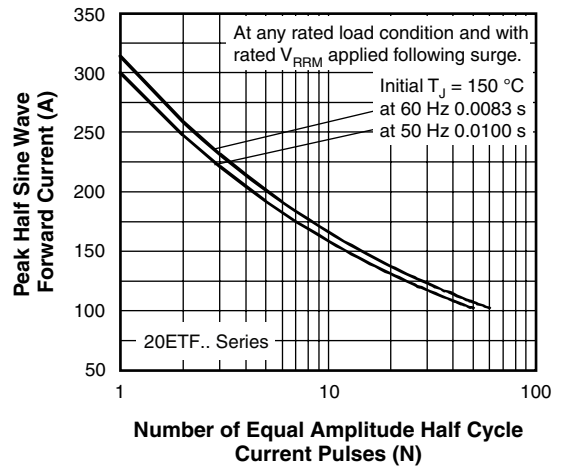


Fig. 5 - Maximum Non-Repetitive Surge Current

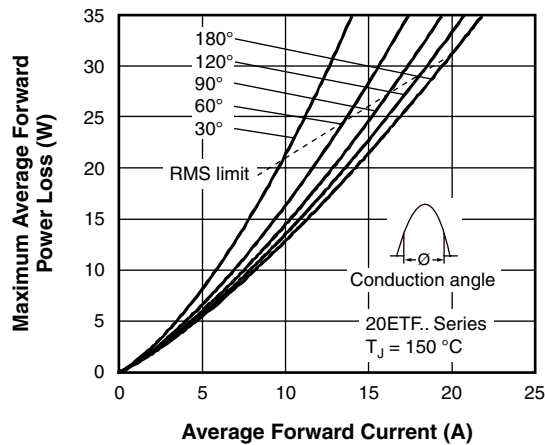


Fig. 3 - Forward Power Loss Characteristics

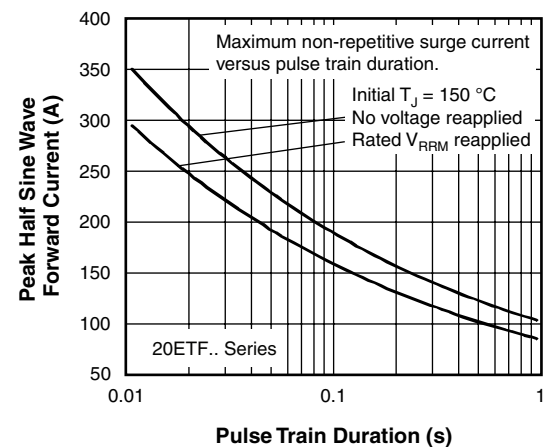


Fig. 6 - Maximum Non-Repetitive Surge Current

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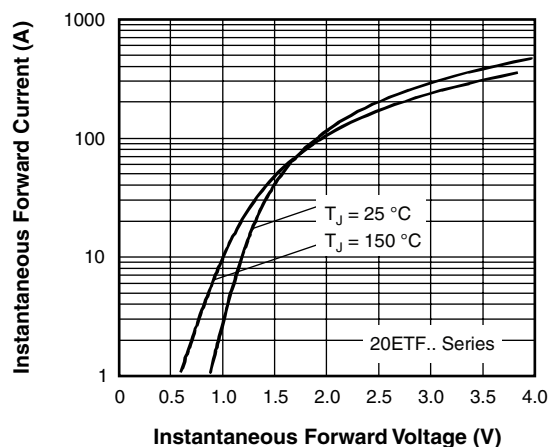


Fig. 7 - Forward Voltage Drop Characteristics

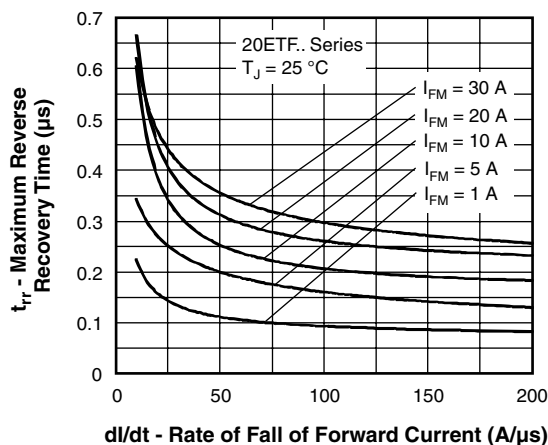


Fig. 8 - Recovery Time Characteristics, $T_J = 25\text{ }^{\circ}\text{C}$

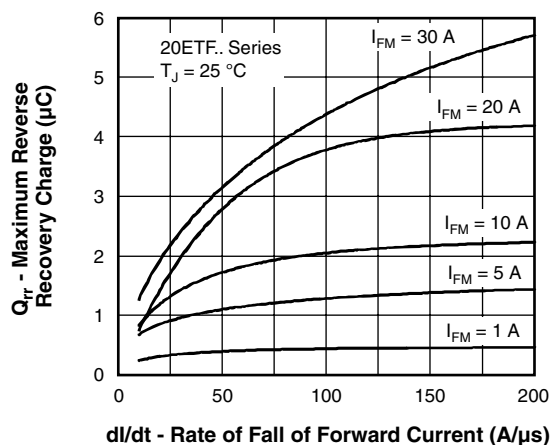


Fig. 10 - Recovery Charge Characteristics, $T_J = 25\text{ }^{\circ}\text{C}$

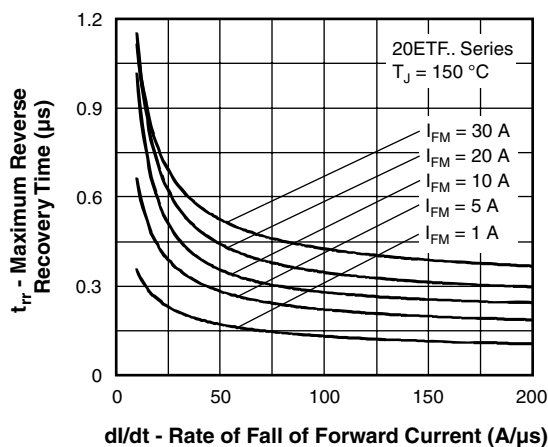


Fig. 9 - Recovery Time Characteristics, $T_J = 150\text{ }^{\circ}\text{C}$

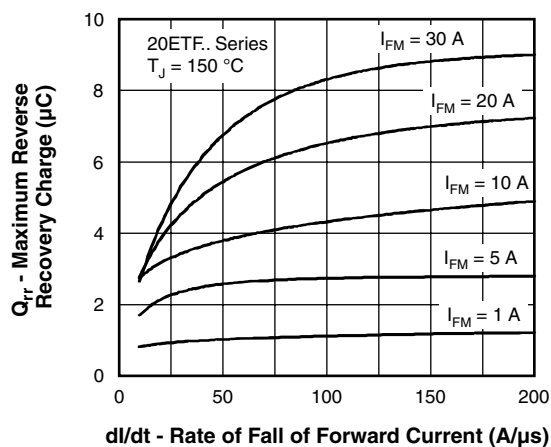


Fig. 11 - Recovery Charge Characteristics, $T_J = 150\text{ }^{\circ}\text{C}$



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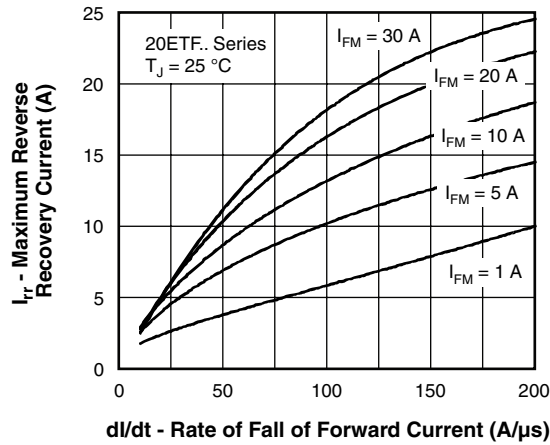


Fig. 12 - Recovery Current Characteristics, $T_J = 25^\circ C$

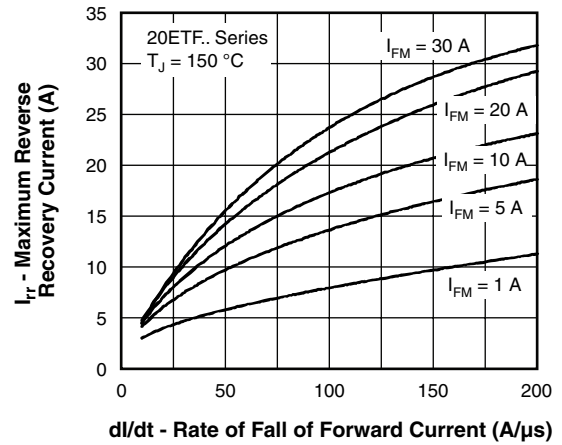


Fig. 13 - Recovery Current Characteristics, $T_J = 150^\circ C$

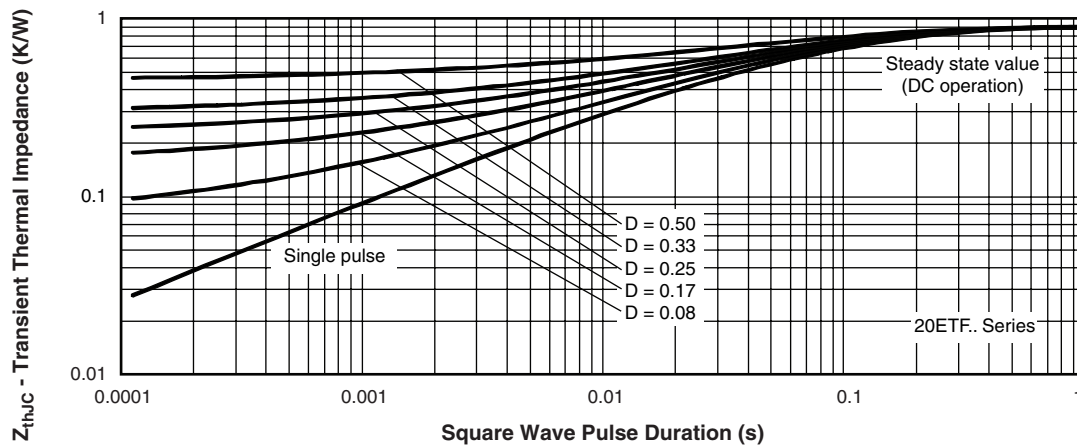


Fig. 14 - Thermal Impedance Z_{thJC} Characteristics

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ORDERING INFORMATION TABLE

Device code	20	E	T	F	12	-
	1	2	3	4	5	6
	1	2	3	4	5	6
	1 - Current rating (20 = 20 A)					
	2 - Circuit configuration:					
	E = Single diode					
	3 - Package:					
	T = TO-220AC					
	4 - Type of silicon:					
	F = Fast soft recovery rectifier					
	5 - Voltage ratings					
	6 - • None = Standard production • PbF = Lead (Pb)-free					
	08 = 800 V 10 = 1000 V 12 = 1200 V					

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



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