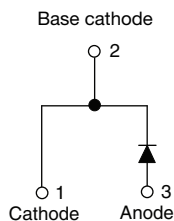
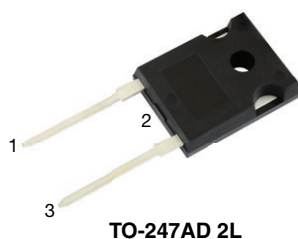


Hyperfast Rectifier, 60 A FRED Pt® G5



FEATURES

- Hyperfast and optimized Q_{rr}
- Best in class forward voltage drop and switching losses trade off
- Optimized for high speed operation
- 175 °C maximum operating junction temperature
- Polyimide passivation
- AEC-Q101 qualified, meets JESD 201 class 2 whisker test
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	60 A
V_R	600 V
V_F at I_F at 125 °C	1.4 V

**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}	$I_F = 1.0\text{ A}$, $di_F/dt = 100\text{ A}/\mu\text{s}$, $V_R = 30\text{ V}$	-	26	-	ns
		$T_J = 25\text{ }^{\circ}\text{C}$	-	44	-	
		$T_J = 125\text{ }^{\circ}\text{C}$	-	62	-	
Peak recovery current	I_{RRM}	$T_J = 25\text{ }^{\circ}\text{C}$	-	16	-	A
		$T_J = 125\text{ }^{\circ}\text{C}$	-	33	-	
		$I_F = 40\text{ A}$, $di_F/dt = 1000\text{ A}/\mu\text{s}$, $V_R = 400\text{ V}$	-	381	-	
Reverse recovery charge	Q_{rr}	$T_J = 25\text{ }^{\circ}\text{C}$	-	1283	-	nC
		$T_J = 125\text{ }^{\circ}\text{C}$	-	-	-	
		$I_F = 60\text{ A}$, $di_F/dt = 1000\text{ A}/\mu\text{s}$, $V_R = 400\text{ V}$	-	46	-	

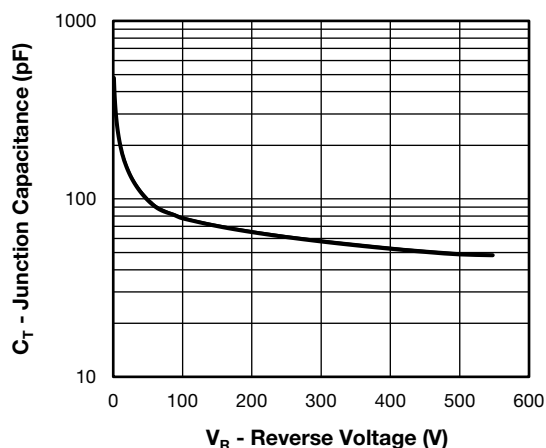


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

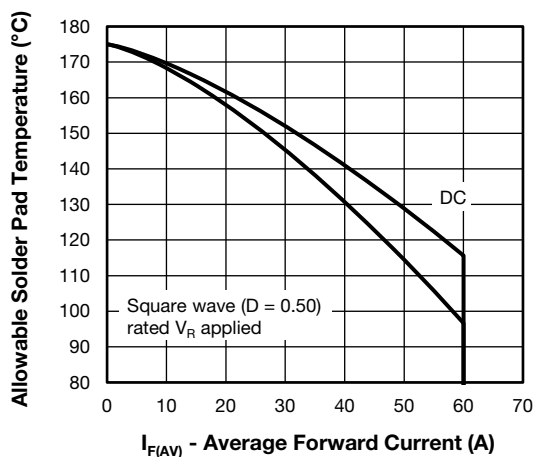


Fig. 4 - Maximum Allowable Case Temperature vs. Average Forward Current

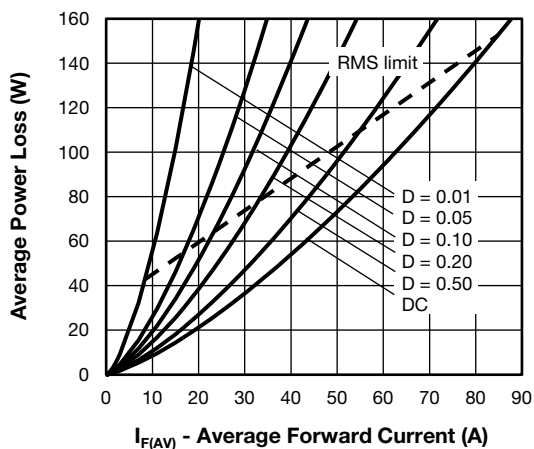
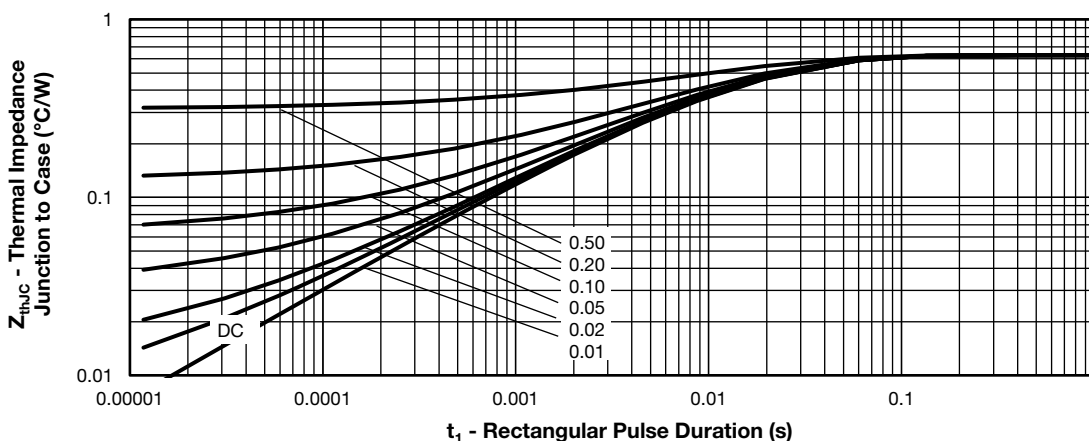
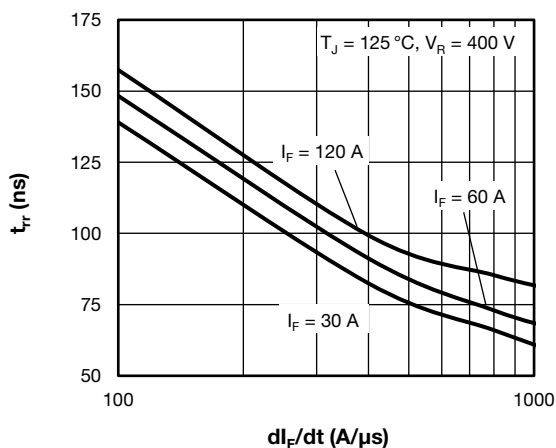
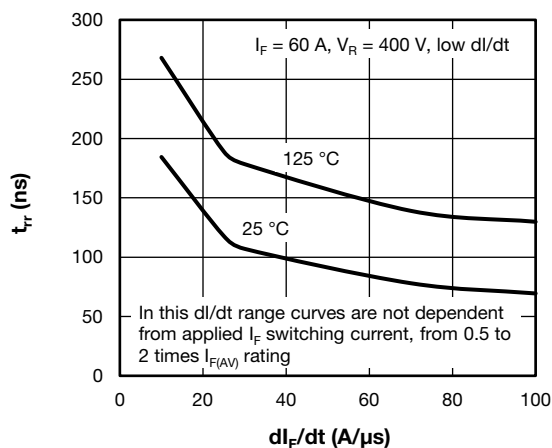
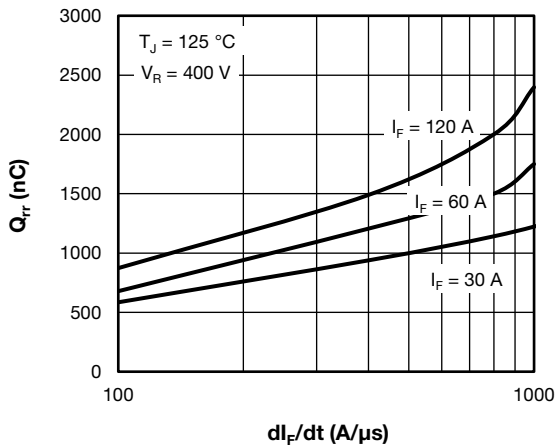


Fig. 5 - Forward Power Loss Characteristics




Fig. 7 - Typical Reverse Recovery Time vs. di_F/dt

Fig. 10 - Typical Reverse Recovery Time vs. di_F/dt


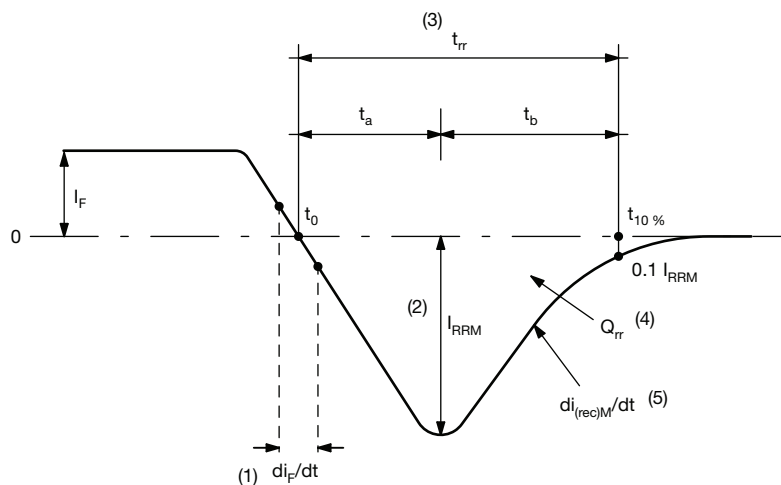


Fig. 13 - Reverse Recovery Waveform and Definitions

Notes

- (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 t_0 , crossing point of negative going I_F , to point $t_{10\%}$, $0.1 I_{RRM}$
- (4) Q_{rr} - area under curve defined by t_0 and $t_{10\%}$

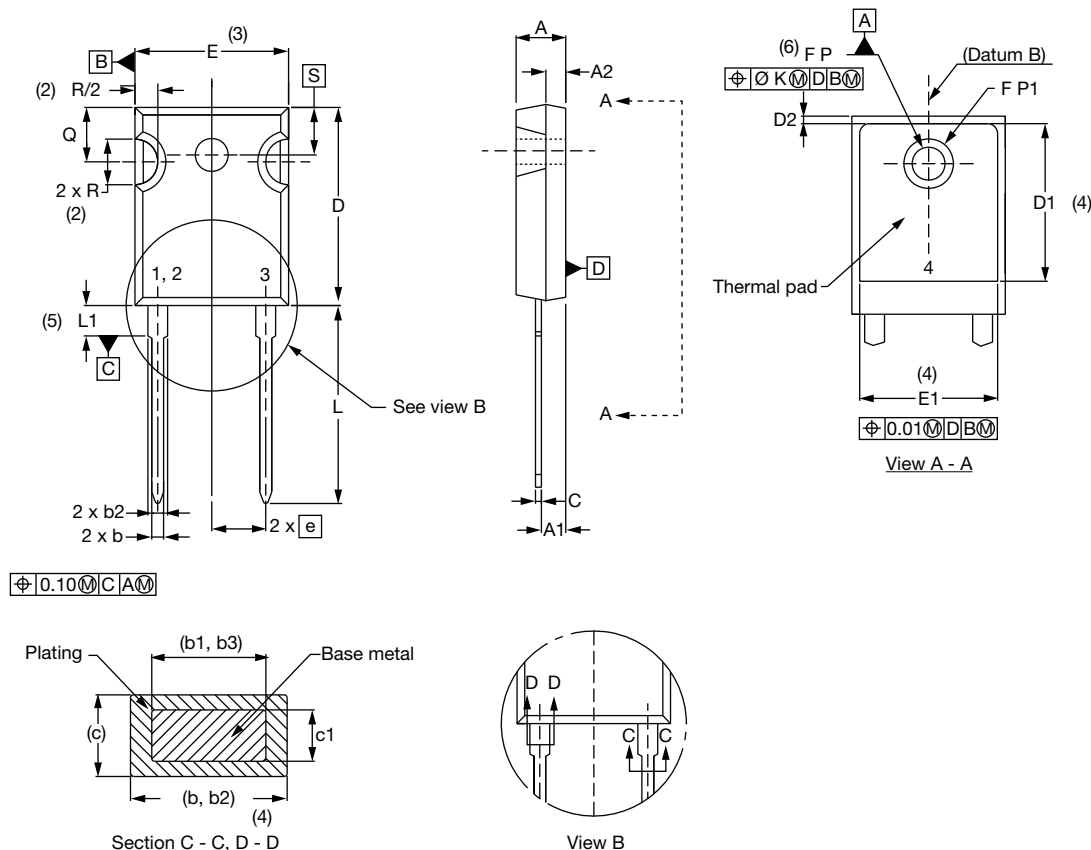
$$Q_{rr} = \int_{t_0}^{t_{10\%}} I(t) dt$$

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



TO-247AD 2L

DIMENSIONS in millimeters and inches



SYMBOL	MILLIMETERS		INCHES		NOTES
	MIN.	MAX.	MIN.	MAX.	
A	4.65	5.31	0.183	0.209	
A1	2.21	2.59	0.087	0.102	
A2	1.50	2.49	0.059	0.098	
b	0.99	1.40	0.039	0.055	
b1	0.99	1.35	0.039	0.053	
b2</					



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