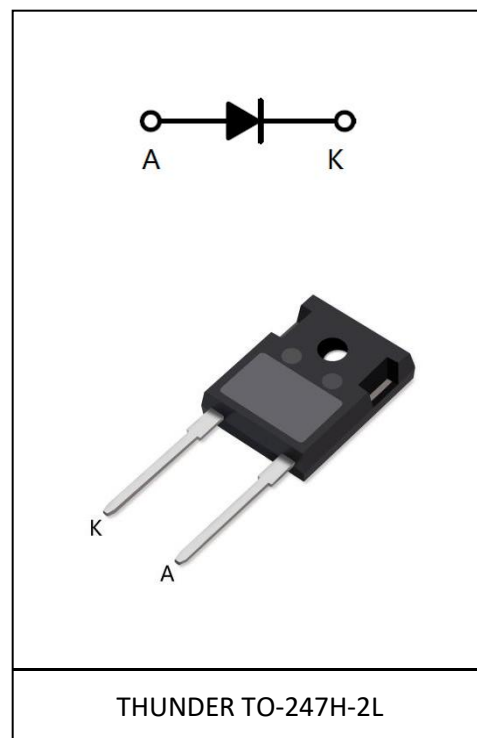


Thunder High Power Products

Standard Rectifier

Features:

- Planar passivated chips
- Very low leakage current
- Very low forward voltage drop
- Improved thermal behaviour
- High commutation robustness
- High surge capability



Description/Applications

- Diode for main rectification
- For single and three phase bridge configurations
- Bypass diode

Product Summary

V_{RRM}	2000V
$I_{F(AV)}$	75A
$V_F(@100A)$	1.25A

Table1: Absolute Maximum Ratings

Parameter	Symbol	Test Conditions	Values	Units
Max non-Repetitive peak reverse voltage	V_{RSM}		2000	V
Max Repetitive peak reverse voltage	V_{RRM}		2000	V
Average forward current	$I_{F(AV)}$	$T_c = 150^{\circ}C$	100	A
Peak forward surge current (10ms single half sine-wave)	I_{FSM}	$T_c = 25^{\circ}C$	1000	
Operating junction temperature	T_j		150	$^{\circ}C$
Storage temperatures	T_{stg}		-55 to +175	$^{\circ}C$
Total power dissipation	P_{tot}		250	W

Table2: Electrical characteristics (Tc=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	V_{BR}, V_R	$I_R=100\mu A$	2000			V
Forward voltage	V_F	$I_F=75A$ (25°C)			1.25	
		$I_F=100A$ (25°C)			1.35	
Reverse current	I_R	$V_R=1800V$			2	μA
		$T_j=150^\circ C, V_R=1800V$			1500	

Table3: Thermal characteristics

Paramter	Symbol	Typ	Max	Units
Junction-to-Case	$R_{\theta JC}$	0.25	0.5	°C/W

Table4: Electrical performance (typical)

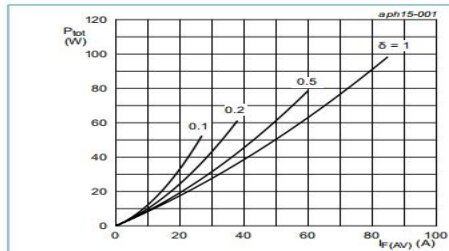


Fig. 1. Forward power dissipation as a function of average forward current; square waveform; maximum values

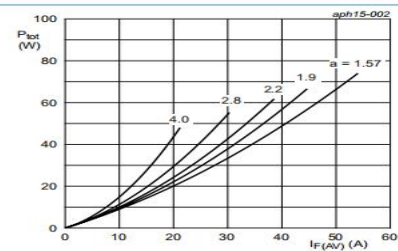


Fig. 2. Forward power dissipation as a function of average forward current; sinusoidal waveform; maximum values

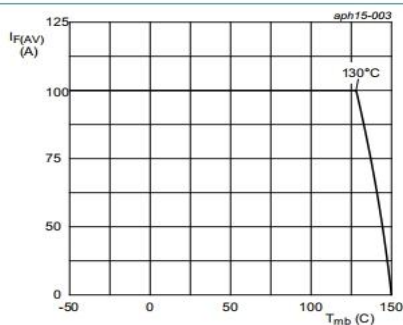


Fig. 3. Forward current as a function of mounting base temperature; maximum values

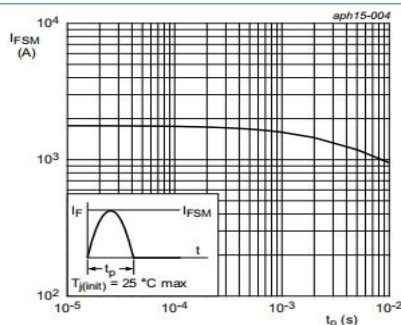


Fig. 4. Non-repetitive peak forward current as a function of pulse width; sinusoidal waveform; maximum values

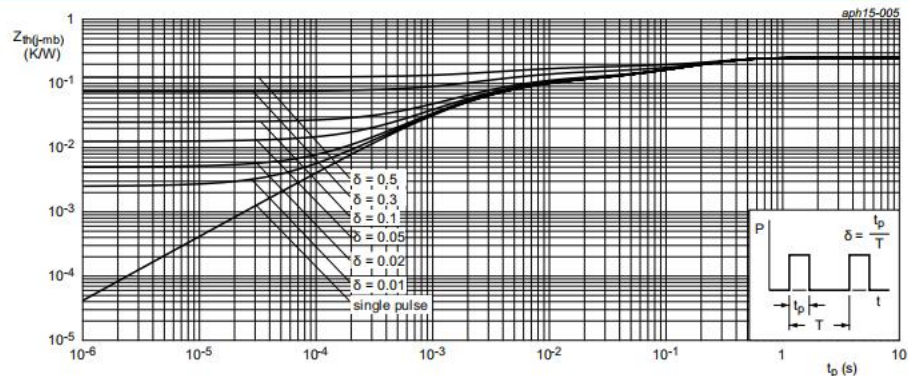


Fig. 5. Transient thermal impedance from junction to mounting base as a function of pulse duration

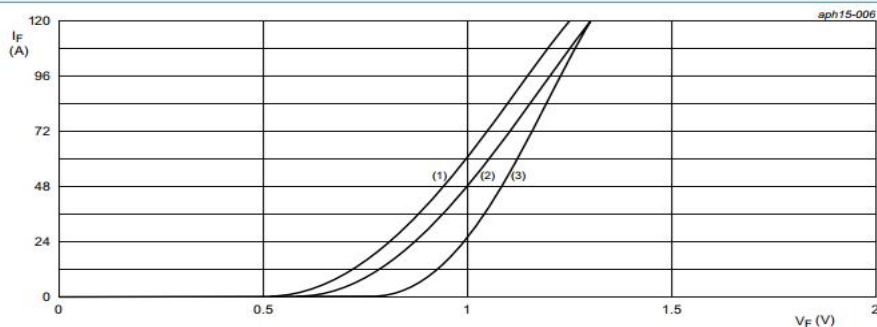
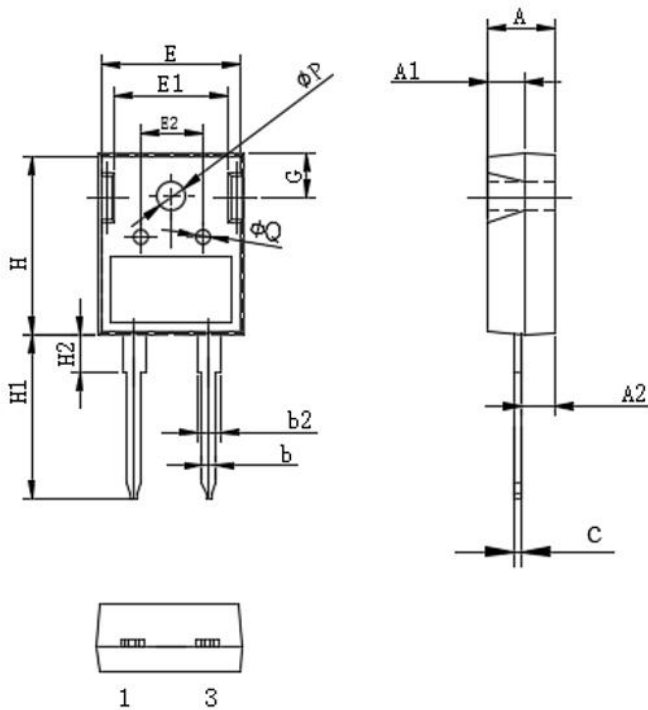


Fig. 6. Forward current as a function of forward voltage

Package Information

TO-247H-2L PACKAGE

基本尺寸



Symbol	单位 mm		
	Min	Nom	Max
A	4.80	5.00	5.20
A1	2.80	3.00	3.20
A2	2.20	2.40	2.60
b	1.05	1.20	1.35
b2	1.80	2.00	2.20
c	0.50	0.60	0.70
E	15.6	15.80	16.0
E1	12.3	12.50	12.7
E2	6.00	6.20	6.40
H	20.5	21.0	21.5
H1	19.0	20.0	21.0
H2	3.00	4.00	5.00
G	5.70	5.90	6.10
ΦP	3.30	3.50	3.50
ΦQ	2.30	2.50	2.70

Notice

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