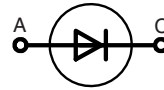


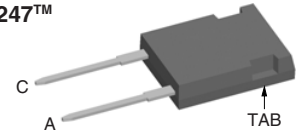
Rectifier Diode

$V_{RRM} = 1600\text{ V}$
 $I_{F(AV)M} = 48\text{ A}$

V_{RSM} V	V_{RRM} V	Type
1700	1600	DSI 45-16AR



ISOPLUS247™
E72873



A = Anode, C = Cathode

Symbol	Conditions	Maximum Ratings
$I_{F(AV)M}$	$T_C = 105^\circ\text{C}$; 180° sine	48 A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10\text{ ms}$ (50 Hz), sine	475 A
	$V_R = 0\text{ V}$; $t = 8.3\text{ ms}$ (60 Hz), sine	520 A
I^2t	$T_{VJ} = 150^\circ\text{C}$; $t = 10\text{ ms}$ (50 Hz), sine	380 A ² s
	$V_R = 0\text{ V}$; $t = 8.3\text{ ms}$ (60 Hz), sine	420 A ² s
I^2t	$T_{VJ} = 150^\circ\text{C}$; $t = 10\text{ ms}$ (50 Hz), sine	720 A ² s
	$V_R = 0\text{ V}$; $t = 8.3\text{ ms}$ (60 Hz), sine	720 A ² s
T_{VJ}		-40...+150 °C
T_{VJM}		150 °C
T_{stg}		-40...+150 °C
V_{ISOL}	50/60 Hz, RMS, $t = 1\text{ minute}$, leads-to-tab	2500 V~
Weight	typical	6 g

Features

- International standard package
- Planar glassivated chips
- Isolated and UL registered
- Epoxy meets UL 94V-0

Applications

- Supplies for DC power equipment
- DC supply for PWM inverter
- Field supply for DC motors
- Battery DC power supplies

Advantages

- Space and weight savings
- Simple mounting
- Improved temperature and power cycling
- Reduced protection circuits

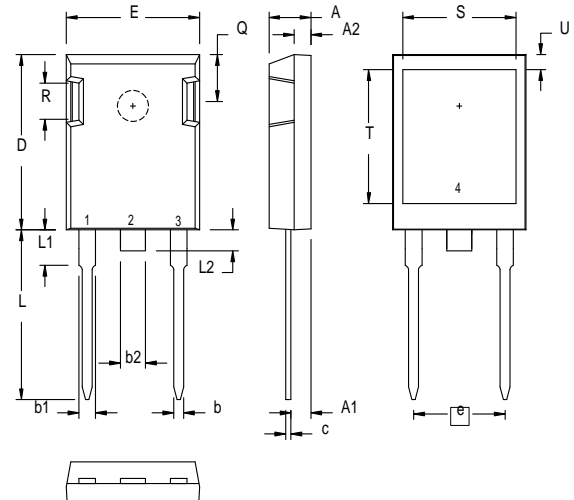
Symbol	Conditions	Characteristic Values
I_R	$T_{VJ} = T_{VJM}$; $V_R = V_{RRM}$	≤ 3 mA
V_F	$I_F = 40\text{ A}$; $T_{VJ} = 25^\circ\text{C}$	≤ 1.18 V
V_{T0}	For power-loss calculations only	0.8 V
r_T	$T_{VJ} = T_{VJM}$	8 mΩ
R_{thJC}	DC current	0.55 K/W
R_{thCH}	typical	0.2 K/W

Dimensions in mm (1 mm = 0.0394")

- NOTE 1. This drawing will meet all dimensions requirement of JEDEC outline 80-247AD except screw hole.
 2. Lead terminals are Pb-free solder plated.
 3. Bottom heatsink (4) is pe-Ni plated and electrically isolated 2,500V from pin 1, 2, and 3

Data according to IEC 60747

SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.190	.205	4.83	5.21
A1	.090	.100	2.29	2.54
A2	.075	.085	1.91	2.16
b	.045	.055	1.14	1.40
b1	.075	.084	1.91	2.13
b2	.115	.123	2.92	3.12
c	.024	.031	0.61	0.80
D	.819	.840	20.80	21.34
E	.620	.635	15.75	16.13
e	.430 BSC		10.92 BSC	
L	.780	.800	19.81	20.32
L1	.150	.170	3.81	4.32
L2	0	.100	0	2.54
Q	.220	.244	5.59	6.20
R	.170	.190	4.32	4.83
S	.520	.540	13.21	13.72
T	.620	.640	15.75	16.26
U	.065	.080	1.65	2.03



IXYS reserves the right to change limits, test conditions and dimensions.

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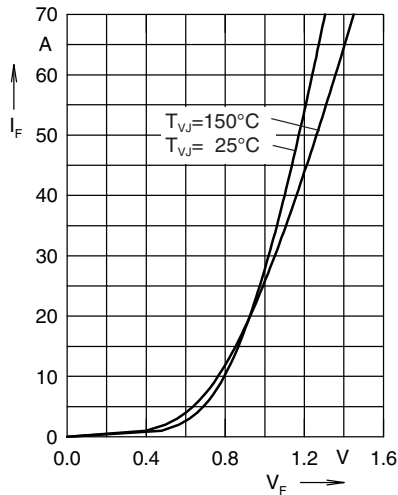


Fig. 1 Forward current versus voltage drop per diode

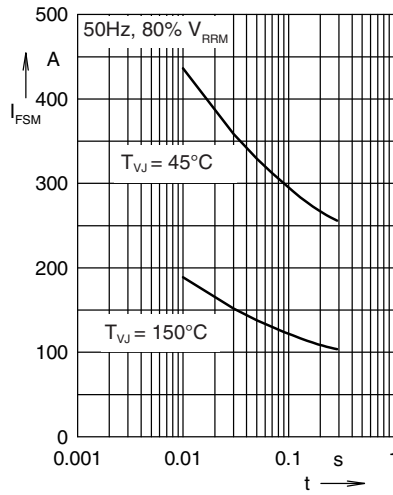


Fig. 2 Surge overload current

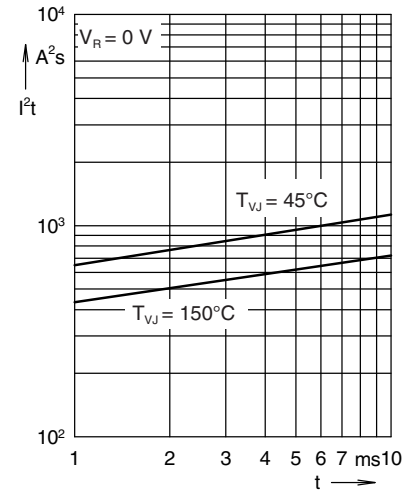


Fig. 3 I^2t versus time per diode

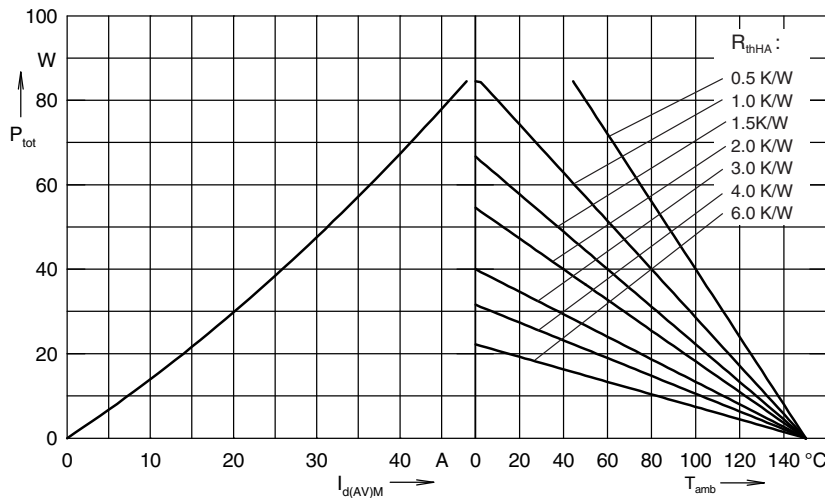


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180°

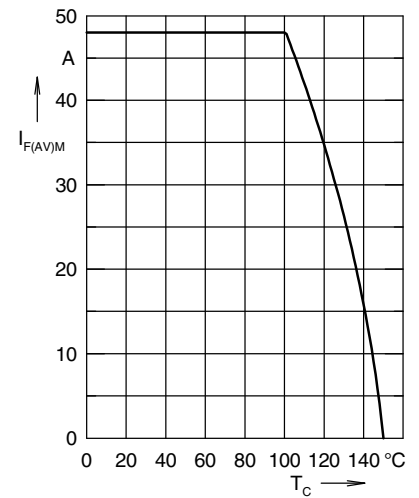


Fig. 5 Max. forward current versus case temperature

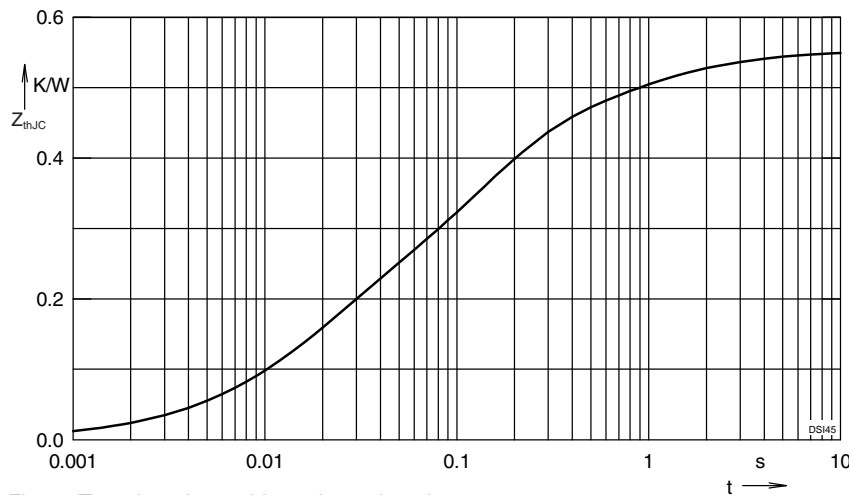


Fig. 6 Transient thermal impedance junction to case

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.1633	0.016
2	0.2517	0.118
3	0.0933	0.588
4	0.04167	2.6