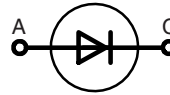


Rectifier Diode

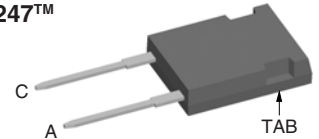
$$V_{RRM} = 1600 \text{ V}$$

$$I_{F(AV)M} = 48 \text{ A}$$

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
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	380	A
	$V_R = 0 \text{ V}$; $t = 8.3 \text{ ms}$ (60 Hz), sine	420	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	1120	A ² s
	$V_R = 0 \text{ V}$; $t = 8.3 \text{ ms}$ (60 Hz), sine	1120	A ² s
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (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

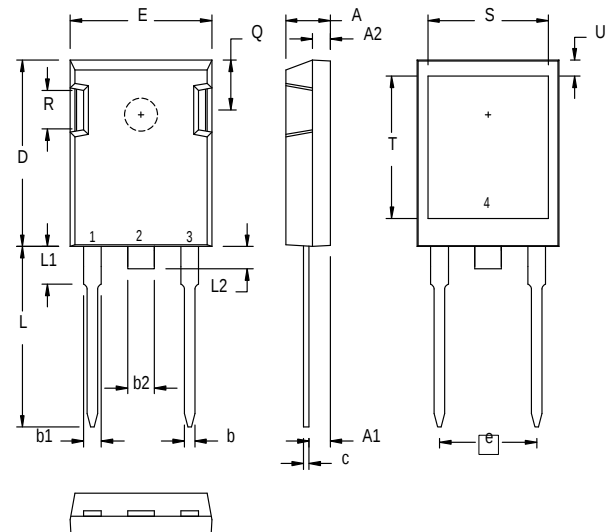
Advantages

- 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

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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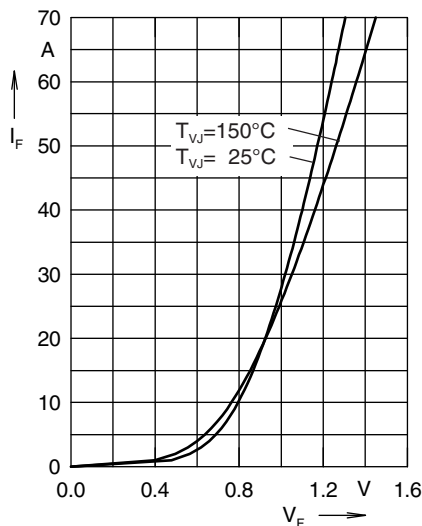


Fig. 1 Forward current versus voltage drop per diode

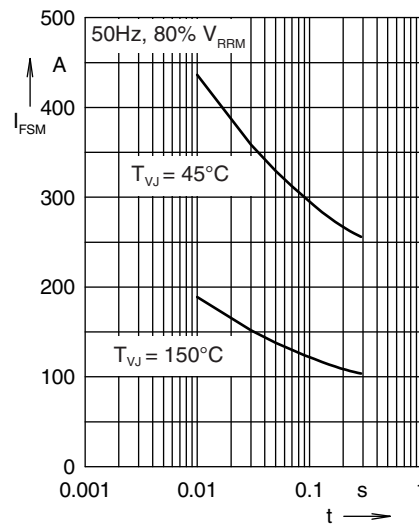


Fig. 2 Surge overload current

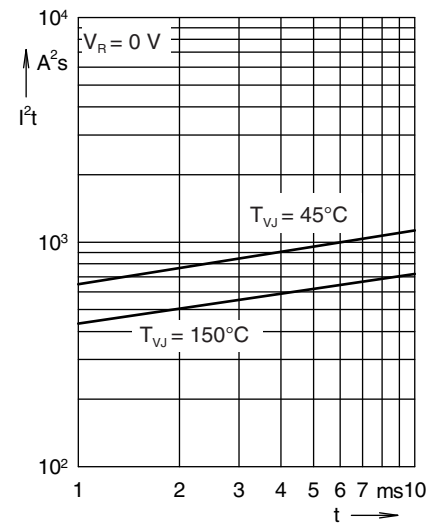


Fig. 3 I^2t versus time per diode

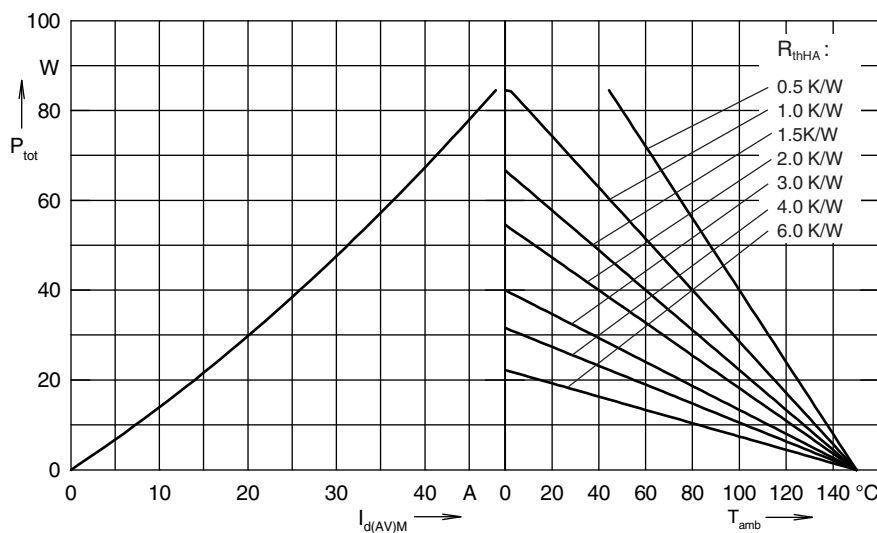


Fig. 4 Power dissipation versus direct output current and ambient temperature, sine 180°

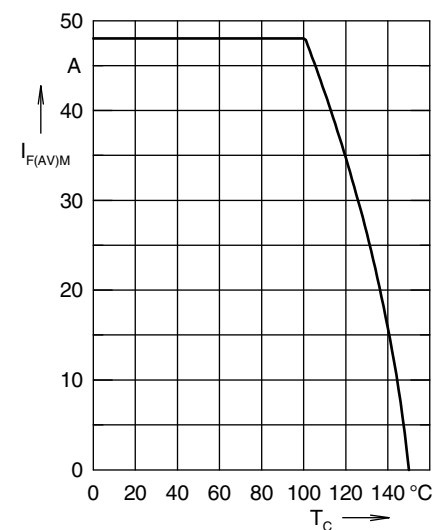


Fig. 5 Max. forward current versus case temperature

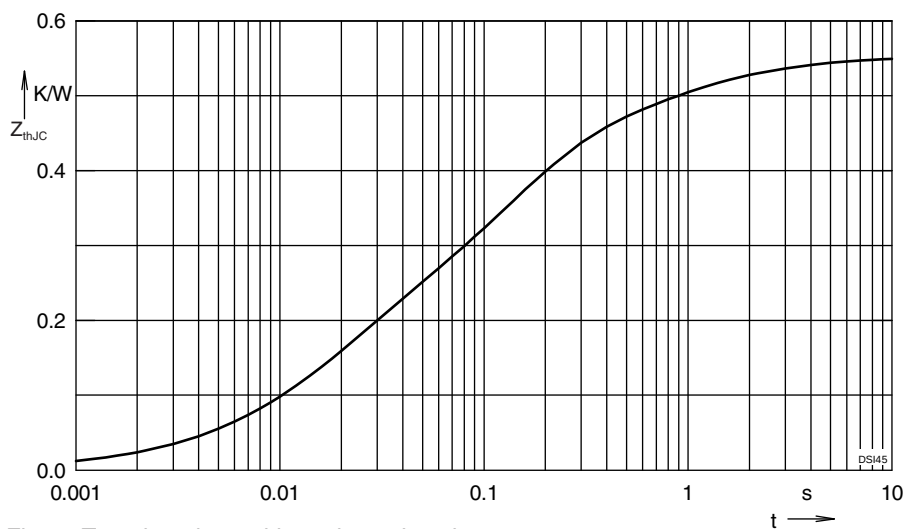


Fig. 6 Transient thermal impedance junction to case

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