

Rectifier Diode

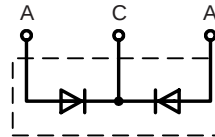
with common cathode

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

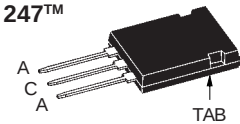
$$I_{F(AV)M} = 45 \text{ A}$$

Preliminary data sheet

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



ISOPLUS 247™



A = Anode, C = Cathode

Symbol	Conditions	Maximum Ratings	
$I_{F(AV)M}$	$T_C = 100^\circ\text{C}$; 180° sine	45	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	510	A
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	410	A
	$V_R = 0 \text{ V}$; $t = 8.3 \text{ ms}$ (60 Hz), sine	440	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	1130	A ² s
	$V_R = 0 \text{ V}$; $t = 8.3 \text{ ms}$ (60 Hz), sine	1090	A ² s
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	840	A ² s
	$V_R = 0 \text{ V}$; $t = 8.3 \text{ ms}$ (60 Hz), sine	810	A ² s
T_{VJ}		-40...+150	°C
T_{VJM}		150	°C
T_{stg}		-40...+150	°C
F_C	mounting force with clips	20...120	N
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 E153432
- Epoxy meets UL 94V-0

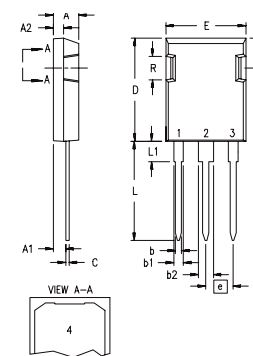
Applications

- 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	$T_{VJ} = T_{VJM}$; $V_R = V_{RRM}$	$\leq$ 3	mA
V_F	$I_F = 40 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	$\leq$ 1.22	V
V_{T0}	For power-loss calculations only	0.8	V
r_T	$T_{VJ} = T_{VJM}$	8	mΩ
R_{thJC}	DC current	0.65	K/W
R_{thCH}	typical	0.2	K/W



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.83	5.21	.190	.205
A ₁	2.29	2.54	.090	.100
A ₂	1.91	2.16	.075	.085
b	1.14	1.40	.045	.055
b ₁	1.91	2.13	.075	.084
b ₂	2.92	3.12	.115	.123
C	0.61	0.80	.024	.031
D	20.80	21.34	.819	.840
E	15.75	16.13	.620	.635
e	5.45 BSC		.215 BSC	
L	19.81	20.32	.780	.800
L ₁	3.81	4.32	.150	.170
Q	5.59	6.20	.220	.244
R	4.32	4.83	.170	.190

Data according to IEC 60747

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