

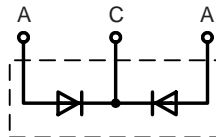
# Rectifier Diode

with common cathode

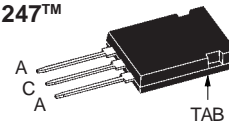
$V_{RRM} = 1600\text{ V}$   
 $I_{F(AV)M} = 45\text{ A}$

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
$I^2t$	$T_{VJ} = 150^\circ\text{C}$ ; $t = 10\text{ ms}$ (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 <sup>2</sup> s
	$V_R = 0\text{ V}$ ; $t = 8.3\text{ ms}$ (60 Hz), sine	1090	A <sup>2</sup> s
$I^2t$	$T_{VJ} = 150^\circ\text{C}$ ; $t = 10\text{ ms}$ (50 Hz), sine	840	A <sup>2</sup> s
	$V_R = 0\text{ V}$ ; $t = 8.3\text{ ms}$ (60 Hz), sine	810	A <sup>2</sup> 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

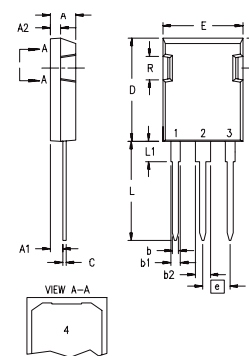
### Applications

- 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	
$I_R$	$T_{VJ} = T_{VJM}$ ; $V_R = V_{RRM}$	≤ 3	mA
$V_F$	$I_F = 40\text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$	≤ 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 <sub>1</sub>	2.29	2.54	.090	.100
A <sub>2</sub>	1.91	2.16	.075	.085
b	1.14	1.40	.045	.055
b <sub>1</sub>	1.91	2.13	.075	.084
b <sub>2</sub>	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
L1	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.