IXYS

ADVANCE TECHNICAL INFORMATION

DSS 20-01AC

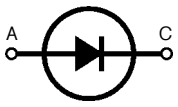
Power Schottky Rectifier

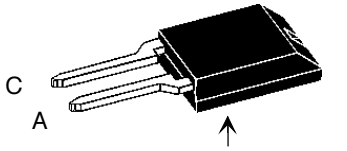
I_{FAV} = 20 A
V_{RRM} = 100 V
V_F = 0.65 V

ISOPLUS220™

Electrically Isolated Back Surface

V_{RSM} V	V_{RRM} V	Type
100	100	DSS 20-01AC





Isolated back surface *

* Patent pending

Symbol	Conditions	Maximum Ratings	
I_{FRMS}		35	A
I_{FAV}	T_C = 140°C; rectangular, d = 0.5	20	A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	120	A
E_{AS}	I_{AS} = 8 A; L = 180 μH; T_{VJ} = 25°C; non repetitive	7	mJ
I_{AR}	V_A =1.5 V_{RRM} typical; f=10 kHz; repetitive	0.8	A
$(dv/dt)_{cr}$		5000	V/µs
T_{VJ}		-55...+175	°C
T_{VJM}		175	°C
T_{stg}		-55...+150	°C
P_{tot}	T_C = 25°C	90	W
V_{ISOL}	50/60Hz RMS; I_{ISOL}< 1 mA	2500	V~
F_C	Mounting force	11... 65 / 2.4 ...11	N/lb
Weight	typical	3	g

Symbol	Conditions	Characteristic Values typ.	max.	
I_R ①	T_{VJ} = 25°C V_R = V_{RRM}		300	µA
	T_{VJ} = 125°C V_R = V_{RRM}		2.5	mA
V_F ②	I_F = 10 A; T_{VJ} = 125°C		0.65	V
	I_F = 10 A; T_{VJ} = 25°C		0.80	V
	I_F = 20 A; T_{VJ} = 125°C		0.76	V
R_{thJC}			1.7	K/W
R_{thCH}		0.6		K/W

Pulse test: ① Pulse Width = 5 ms, Duty Cycle < 2.0 %
② Pulse Width = 300 µs, Duty Cycle < 2.0 %

Features

- Silicon chip on Direct-Copper-Bond substrate
  - High power dissipation
  - Isolated mounting surface
  - 2500V electrical isolation
- Low cathode to tab capacitance(<35pF)

International standard package
Very low V_F
Extremely low switching losses
Low I_{RM}-values
Epoxy meets UL 94V-0

Applications

Rectifiers in switch mode power supplies (SMPS)
Free wheeling diode in low voltage converters

Advantages

High reliability circuit operation
Low voltage peaks for reduced protection circuits
Low noise switching
Low losses

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

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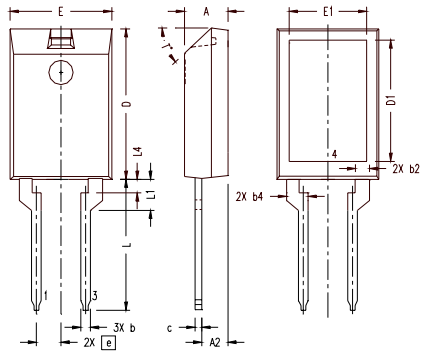
ISOPLUS220 OUTLINE



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.157	.197	4.00	5.00
A2	.098	.118	2.50	3.00
b	.035	.051	0.90	1.30
b2	.049	.065	1.25	1.65
b4	.093	.100	2.35	2.55
c	.028	.039	0.70	1.00
D	.591	.630	15.00	16.00
D1	.472	.512	12.00	13.00
E	.394	.433	10.00	11.00
E1	.295	.335	7.50	8.50
e	.100 BASIC		2.55 BASIC	
L	.512	.571	13.00	14.50
L1	.118	.138	3.00	3.50
L4	.039	.059	1.00	1.50
T°			42.5°	47.5°

Note: All terminals are solder plated.
1 - Cathode
3 - Anode