IXYS

DSS 20-01AC

Power Schottky Rectifier ISOPLUS220™

Electrically Isolated Back Surface

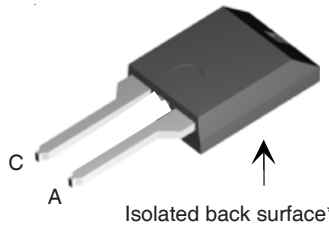
I_{FAV} = 20 A
V_{RRM} = 100 V
V_F = 0.65 V

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

Preliminary Data Sheet



ISOPLUS 220™



Isolated back surface*

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
T_L	1.6 mm (0.063 in) from case for 10 s	260	°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

Note: See DSS 16-01A for electrical characteristic curves.

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(<15pF)
- 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

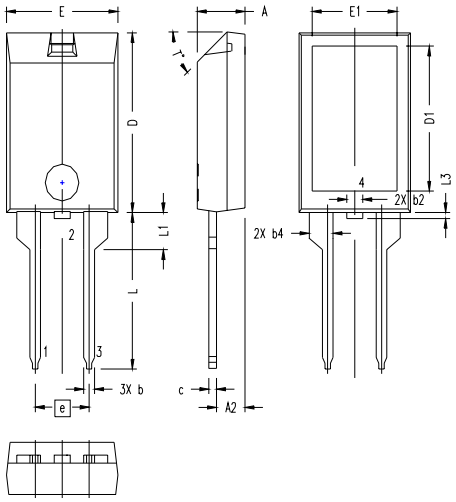
See DSS 20-01A data sheet for characteristic curves

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

DS98787(07/03)

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ISOPLUS220 Outline (2 leads)



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	.200 BASIC		5.08 BASIC	
L	.512	.571	13.00	14.50
L1	.118	.138	3.00	3.50
L3	.000	.059	0.00	1.50
T°			42.5°	47.5°

NOTE:
1. Bottom heatsink (Pin 4) is electrically isolated from Pin 1, 2, or 3.

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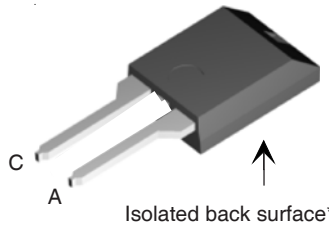
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V_F ②	I_F = 10 A; T_{VJ} = 125°C		0.65	V
	I_F = 10 A; T_{VJ} = 25°C		0.80	V
	I_F = 20 A; T_{VJ} = 125°C		0.76	V
R_{thJC}			1.7	K/W
R_{thCH}		0.6		K/W

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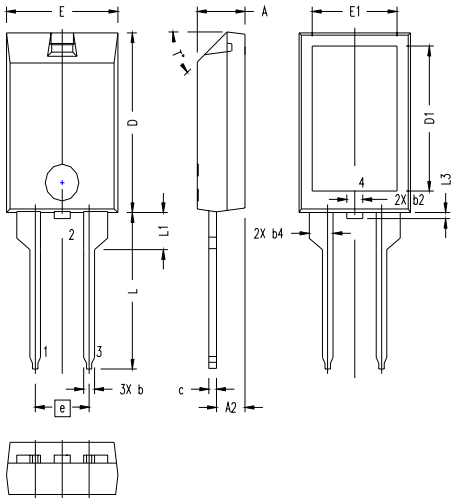
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