IXYS

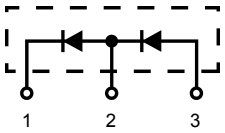
ADVANCE TECHNICAL INFORMATION

DGSS 20-05C

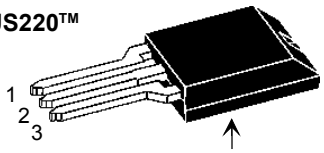
Gallium Arsenide Schottky Diode
ISOPLUS220™
Electrically Isolated Back Surface

I_{DC} = 13 A
V_{RRM} = 500 V
$C_{JUNCTION}$ = 26 pF

V_{RRM} ① V	V_{RRM} V	Type
500	250	DGSS 20-025C



ISOPLUS220™



Isolated back surface *

Symbol	Conditions	Maximum Ratings	
I_{DC}	T_C = 25°C	13	A
I_{FAV}	T_C = 90°C; 50% Duty cycle; Square wave	8.5	A
I_{FSM}	T_{VJ} = 25°C; t_p = 10 ms, sine	50	A
T_{VJ}		-55...+175	°C
T_{stg}		-55...+150	°C
P_{tot}	T_C = 25°C	40	W
V_{ISOL}	50/60 Hz RMS; $I_{ISOL} \leq$ 1 mA	2500	V~
F_C	Mounting force	11...65 / 2.4...11	N / lb
Weight	typical	2	g

Symbol	Conditions	Characteristic Values typ.	max.	
I_R ①	T_{VJ} = 25°C V_R = V_{RRM}		2	mA
	T_{VJ} = 150°C V_R = V_{RRM}	10		mA
V_F ②	I_F = 7.5 A; T_{VJ} = 25°C	1.2	1.5	V
	I_F = 7.5 A; T_{VJ} = 125°C	1.3		V
C_J	V_R = 100 V; T_{VJ} = 125°C	26		pF
R_{thJC}			3.7	K/W
R_{thCH}		0.6		K/W

Notes: Data given for T_{VJ} = 25°C and per diode unless otherwise specified
① Diodes connected in series
② Pulse test: pulse Width = 5 ms, Duty Cycle < 2.0 %
③ Pulse test: pulse Width = 300 µs, Duty Cycle < 2.0 %

* Patent pending

Features

- Silicon chip on Direct-Copper-Bond substrate
  - High power dissipation
  - Isolated mounting surface
  - 2500V electrical isolation
- Low forward voltage
- Very high switching speeds
- Soft reverse recovery
- Temperature independent switching behaviour
- High temperature operation capability
- Low cathode to tab capacitance (<15pF)
- Epoxy meets UL 94V-0

Applications

- Switched mode power supplies (SMPS)
- High frequency converters
- Resonant converters

See DGS20-025A data sheet for characteristic curves

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

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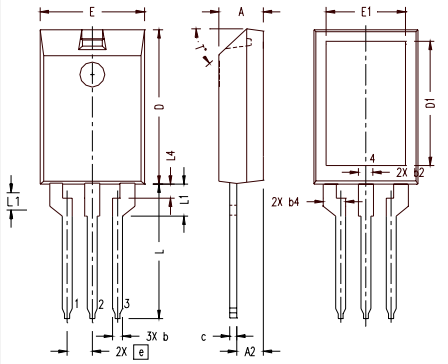
ISOPLUS220 OUTLINE



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
2 - Anode/Cathode
3 - Anode