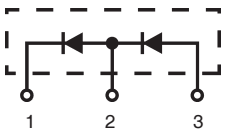
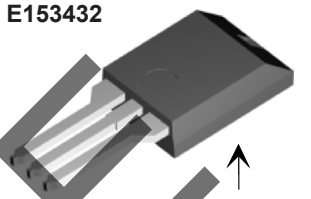
Phase-leg Rectifier Diode
ISOPLUS220™
Electrically Isolated Back Surface

V_{RRM} = 800/1200 V
$I_{F(AV)M}$ = 2 x 11 A

V_{RSM} V	V_{RRM} V	Type
900	800	DSP 8-08AC
1300	1200	DSP 8-12AC



ISOPLUS 220™
E153432



Preliminary Data Sheet

OBSOLETE

Symbol	Test Conditions			Maximum Ratings	
I_{FRMS}	$T_{VJ} = T_{VJM}$			30	A
$I_{F(AV)M}$	T_{case} = 100°C; 180° sine			2 x 11	A
I_{FSM}	T_{VJ} = 45°C;	t = 10 ms	(50 Hz), sine	100	A
		t = 8.3 ms	(60 Hz), sine	105	A
	T_{VJ} = 150°C;	t = 10 ms	(50 Hz), sine	85	A
		t = 8.3 ms	(60 Hz), sine	90	A
I^2t	T_{VJ} = 45°C	t = 10 ms	(50 Hz), sine	50	A^2s
		t = 8.3 ms	(60 Hz), sine	45	A^2s
	T_{VJ} = 150°C;	t = 10 ms	(50 Hz), sine	35	A^2s
		t = 8.3 ms	(60 Hz), sine	30	A^2s
T_{VJ}				-40...+150	°C
T_{VJM}				150	°C
T_{stg}				-55...+150	°C
T_L	1.6 mm (0.063 in) from case for 10 s			260	°C
V_{ISOL}	50/60 Hz RMS; $I_{ISOL} \leq$ 1 mA			2500	V~
F_C	Mounting Force			11...65 / 2.5..15	N/lb
Weight				2	g

Symbol	Test Conditions		Characteristic Values	
I_R ①	$V_R = V_{RRM}$; T_{VJ} = 25°C	≤	10	µA
	T_{VJ} = 150°C	≤	0.7	mA
V_F ②	I_F = 10 A; T_{VJ} = 25°C	≤	1.22	V
	T_{VJ} = 125°C	≤	1.26	V
V_{T0}	For power-loss calculations only		0.8	V
r_T	$T_{VJ} = T_{VJM}$		41	mΩ
R_{thJC}	DC current		1.8	K/W
R_{thCK}	DC current (with heatsink compound)	typ.	0.6	K/W
a	Maximum allowable acceleration		100	m/s^2

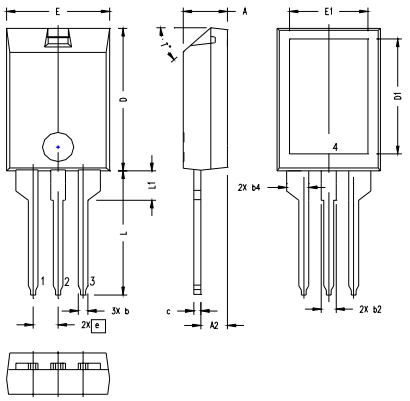
Notes: Data given for T_{VJ} = 25°C and per diode unless otherwise specified
① Pulse test: pulse Width = 5 ms, Duty Cycle < 2.0 %
②Pulse test: pulse Width = 300 µs, Duty Cycle < 2.0 %

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

Features

- Silicon chip on Direct-Copper-Bond substrate
  - High power dissipation
  - Isolated mounting surface
  - 2500V electrical isolation
- For single and three phase bridge configuration
- Low cathode to tab capacitance (<15pF)
- Planar passivated chips
- Epoxy meets UL 94V-0

ISOPLUS220 Outline



SYM	INCHES MIN	INCHES MAX	MILLIMETERS MIN	MILLIMETERS 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
T°			42.5°	47.5°

NOTE:
1. Bottom heatsink (Pin 4) is electrically isolated from Pin 1, 2, or 3.
2. This drawing will meet dimensional requirement of JEDEC SS Product Outline TO-273 except D and D1 dimension.

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