Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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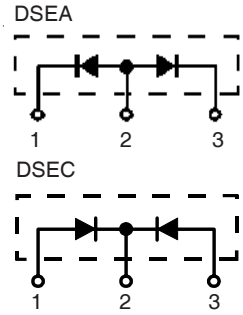
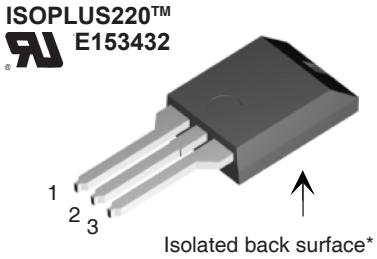
HiPerFRED™ Epitaxial Diode
ISOPLUS220™
Electrically Isolated Back Surface

I_{FAV} = 2x30 A
V_{RRM} = 600 V
t_{rr} = 35 ns

Preliminary Data Sheet

V_{RSM} V	V_{RRM} V	Type
600	600	DSEA 59-06BC DSEC 59-06BC





Symbol	Conditions	Maximum Ratings	
I_{FRMS} ①	Lead current limit	45	A
I_{FAVM}	T_C = 105°C; rectangular, d = 0.5	30	A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	200	A
E_{AS}	T_{VJ} = 25°C; non-repetitive I_{AS} = 1.3 A; L = 180 µH	0.2	mJ
I_{AR}	$V_A = 1.5 \cdot V_R$ typical; f = 10 kHz; repetitive	0.1	A
T_{VJ}		-40...+175	°C
T_{VJM}		175	°C
T_{stg}		-40...+150	°C
T_L	1.6 mm (0.063 in) from case for 10 s	260	°C
P_{tot}	T_C = 25°C	136	W
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	typical	2	g

Symbol	Conditions		Characteristic Values typ.	max.	
I_R ②	T_{VJ} = 25°C T_{VJ} = 150°C	$V_R = V_{RRM}$ $V_R = V_{RRM}$		250 2	µA mA
V_F ③	I_F = 30 A;	T_{VJ} = 150°C T_{VJ} = 25°C		1.56 2.51	V V
R_{thJC} R_{thCH}			 0.6	1.1	K/W K/W
t_{rr}	I_F = 1 A; -di/dt = 200 A/µs; V_R = 30 V; T_{VJ} = 25°C		30		ns
I_{RM}	V_R = 100 V; T_{VJ} = 100°C	I_F = 50 A; $-di_F/dt$ = 100 A/µs	4		A

Notes: Data given for T_{VJ} = 25°C and per diode unless otherwise specified
① Average current per diode may be limited by center lead RMS current limit when both diodes are conducting.
② Pulse test: pulse Width = 5 ms, Duty Cycle < 2.0 %
③ Pulse test: pulse Width = 300 µs, Duty Cycle < 2.0 %

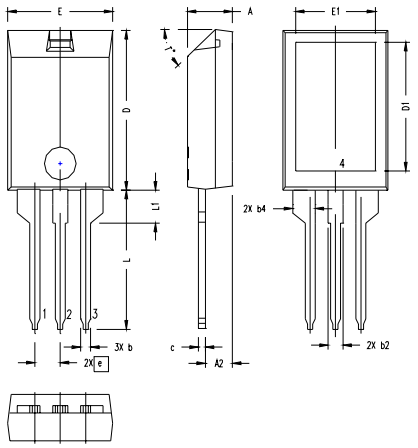
Features
- Silicon chip on Direct-Copper-Bond substrate
  - High power dissipation
  - Isolated mounting surface
  - 2500V electrical isolation
- Low cathode to tab capacitance (<15pF)
- Planar passivated chips
- Very short recovery time
- Extremely low switching losses
- Low I_{RM}-values
- Soft recovery behaviour
- Epoxy meets UL 94V-0

Applications
- Antiparallel diode for high frequency switching devices
- Antisaturation diode
- Snubber diode
- Free wheeling diode in converters and motor control circuits
- Rectifiers in switch mode power supplies (SMPS)
- Inductive heating
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

Advantages
- Avalanche voltage rated for reliable operation
- Soft reverse recovery for low EMI/RFI
- Low I_{RM} reduces:
  - Power dissipation within the diode
  - Turn-on loss in the commutating switch

See DSEP 29-06B data sheet for characteristic curves

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
T°			42.5°	47.5°

Notes:

DSEA 29
1. Lead 1 = Cathode
2. Lead 2 = Common Anode
3. Lead 3 = Cathode

DSEC 29
1. Lead 1 = Anode
2. Lead 2 = Common Cathode
3. Lead 3 = Anode

Back surface 4 is electrically isolated from leads 1, 2 and 3