

Power Schottky Rectifier

ISOPLUS220™

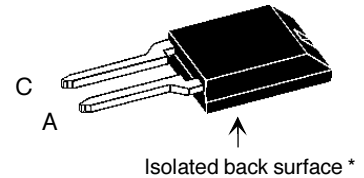
Electrically Isolated Back Surface

$$I_{FAV} = 20 \text{ A}$$

$$V_{RRM} = 100 \text{ V}$$

$$V_F = 0.65 \text{ V}$$

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



* Patent pending

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

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

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

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

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

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ISOPLUS220 OUTLINE
