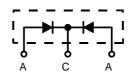


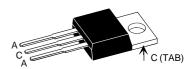
HiPerFRED™ Epitaxial Diode with common cathode and soft recovery

 $I_{FAV} = 2x 8 A$ $V_{RRM} = 200 V$ $t_{rr} = 25 ns$

V _{RSM}	V _{RRM} V	Туре
200	200	DSEC 16-02A



TO-220 AB



A = Anode, C = Cathode, TAB = Cathode

Symbol	Conditions	Maximum	Maximum Ratings	
I _{FRMS}		35	Α	
I _{FAVM}	$T_C = 150$ °C; rectangular, d = 0.5	8	Α	
I _{FRM}	t_P < 10 μ s; rep. rating, pulse width limited by T	_{vJM} tbd	Α	
I _{FSM}	$T_{VJ} = 45^{\circ}C; t_p = 10 \text{ ms (50 Hz), sine}$	80	Α	
E _{AS}	$T_{VJ} = 25$ °C; non-repetitive $I_{AS} = 2$ A; L = 180 μ H	0.5	mJ	
I _{AR}	$V_A = 1.5 \cdot V_R \text{ typ.}$; f = 10 kHz; repetitive	0.2	Α	
T _{VJ}		-55+175	°C	
T _{VJM}		175	°C	
T _{stg}		-55+150	°C	
P _{tot}	T _C = 25°C	60	W	
M _d	mounting torque	0.40.6	Nm	
Weight	typical	2	g	
Weight	typical	2		

Symbol	Conditions	Characteristic Values		
		typ.	max.	
I _R ①	$T_{VJ} = 25$ °C $V_R = V_{RRM}$ $T_{VJ} = 150$ °C $V_R = V_{RRM}$		50 0.2	μA mA
V _F 2	$I_F = 8 \text{ A};$ $T_{VJ} = 150^{\circ}\text{C}$ $T_{VJ} = 25^{\circ}\text{C}$		0.94 1.30	V V
R _{thJC}		0.5	2.5	K/W K/W
t _{rr}	$I_F = 1 \text{ A}; -di/dt = 50 \text{ A}/\mu\text{s};$ $V_R = 30 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$	25		ns
I _{RM}	$V_R = 100 \text{ V}; \ I_F = 10 \text{ A}; -di_F/dt = 100 \text{ A}/\mu\text{s}$ $T_{VJ} = 100^{\circ}\text{C}$		4.1	А

Features

- · International standard package
- · 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

Dimensions see outlines.pdf

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

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@ Pulse Width = 300 $\mu s,$ Duty Cycle < 2.0 %

Data according to IEC 60747 and per diode unless otherwise specified

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

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