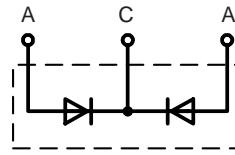


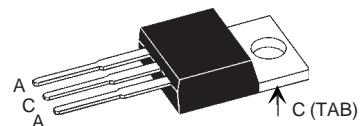
# HiPerFRED™ Epitaxial Diode with common cathode and soft recovery

**I<sub>FAV</sub>** = 2x8 A  
**V<sub>RRM</sub>** = 200 V  
**t<sub>rr</sub>** = 25 ns

V <sub>RSM</sub> V	V <sub>RRM</sub> V	Type
200	200	DSEC 16-02A



TO-220 AB



A = Anode, C = Cathode, TAB = Cathode

Symbol	Conditions	Maximum Ratings	
I <sub>FRMS</sub>		35	A
I <sub>FAVM</sub>	T <sub>C</sub> = 150°C; rectangular, d = 0.5	8	A
I <sub>FRM</sub>	t <sub>p</sub> < 10 µs; rep. rating, pulse width limited by T <sub>VJM</sub>	tbd	A
I <sub>FSM</sub>	T <sub>VJ</sub> = 45°C; t <sub>p</sub> = 10 ms (50 Hz), sine	80	A
E <sub>AS</sub>	T <sub>VJ</sub> = 25°C; non-repetitive I <sub>AS</sub> = 2 A; L = 180 µH	0.5	mJ
I <sub>AR</sub>	V <sub>A</sub> = 1.5·V <sub>R</sub> typ.; f = 10 kHz; repetitive	0.2	A
T <sub>VJ</sub>		-55...+175	°C
T <sub>VJM</sub>		175	°C
T <sub>stg</sub>		-55...+150	°C
P <sub>tot</sub>	T <sub>C</sub> = 25°C	60	W
M <sub>d</sub>	mounting torque	0.4...0.6	Nm
Weight	typical	2	g

Symbol	Conditions	Characteristic Values	
		typ.	max.
I <sub>R</sub> ①	T <sub>VJ</sub> = 25°C V <sub>R</sub> = V <sub>RRM</sub> T <sub>VJ</sub> = 150°C V <sub>R</sub> = V <sub>RRM</sub>	50 0.2	µA mA
V <sub>F</sub> ②	I <sub>F</sub> = 8 A; T <sub>VJ</sub> = 150°C T <sub>VJ</sub> = 25°C	0.94 1.30	V V
R <sub>thJC</sub> R <sub>thCH</sub>		0.5	K/W K/W
t <sub>rr</sub>	I <sub>F</sub> = 1 A; -di/dt = 50 A/µs; V <sub>R</sub> = 30 V; T <sub>VJ</sub> = 25°C	25	ns
I <sub>RM</sub>	V <sub>R</sub> = 100 V; I <sub>F</sub> = 10 A; -di <sub>F</sub> /dt = 100 A/µs T <sub>VJ</sub> = 100°C	4.1	A

## Features

- International standard package
- Planar passivated chips
- Very short recovery time
- Extremely low switching losses
- Low I<sub>RM</sub>-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<sub>RM</sub> reduces:
  - Power dissipation within the diode
  - Turn-on loss in the commuting switch

Dimensions see Outlines.pdf

**Recommended replacement:**  
**DPG20C200PB**

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