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!

Contact us

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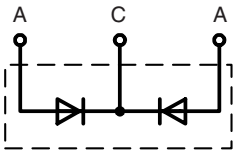
HiPerFRED™ Epitaxial Diode
with common cathode and soft recovery

I_{FAV} = 2x30 A
V_{RRM} = 200 V
t_{rr} = 25 ns

V_{RSM} V	V_{RRM} V	Type
200	200	DSEC 60-02A



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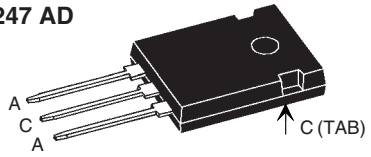

A = Anode, C = Cathode, TAB = Cathode

Symbol	Conditions	Maximum Ratings	
I_{FRMS}		70	A
I_{FAVM}	T_C = 145°C; rectangular, d = 0.5	30	A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	325	A
E_{AS}	T_{VJ} = 25°C; non-repetitive I_{AS} = 3 A; L = 180 µH	1.2	mJ
I_{AR}	$V_A = 1.5 \cdot V_R$ typ.; f = 10 kHz; repetitive	0.3	A
T_{VJ}		-55...+175	°C
T_{VJM}		175	°C
T_{stg}		-55...+150	°C
P_{tot}	T_C = 25°C	165	W
M_d	mounting torque	0.8...1.2	Nm
F_C	mounting force with clip	20...120	N
Weight	typical	6	g

Symbol	Conditions	Characteristic Values typ.	max.	
I_R ①	$V_R = V_{RRM}$; T_{VJ} = 25°C		10	µA
	$V_R = V_{RRM}$; T_{VJ} = 150°C		200	µA
V_F ②	I_F = 30 A; T_{VJ} = 150°C		0.95	V
	T_{VJ} = 25°C		1.20	V
R_{thJC}			0.9	K/W
R_{thCH}		0.25		K/W
t_{rr}	I_F = 1 A; -di/dt = 200 A/µs; V_R = 30 V; T_{VJ} = 25°C	25		ns
I_{RM}	V_R = 100 V; I_F = 50 A; $-di_F/dt$ = 100 A/µs; T_{VJ} = 100°C		4	A

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.

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

Recommended replacement:
DPF60C200HB
DPF80C200HB

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

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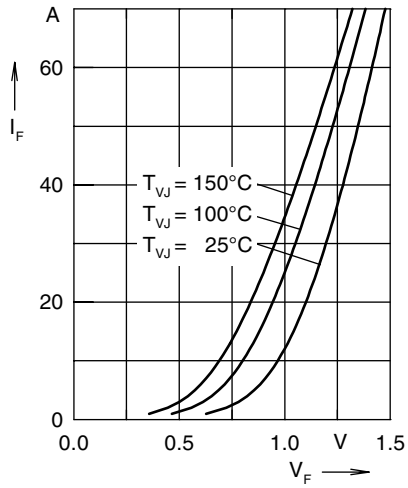

Fig.1 Forward current I_F vs. forward voltage drop V_F

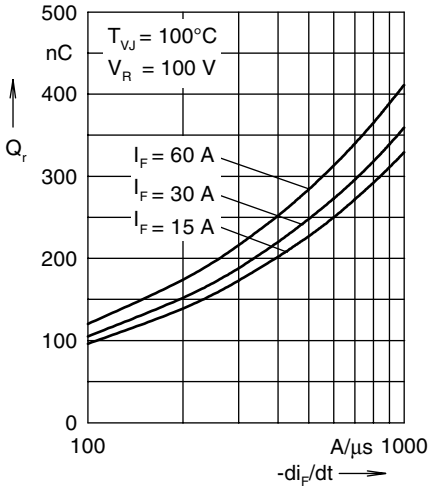

Fig.2 Reverse recovery charge Q_{rr} versus $-di_F/dt$

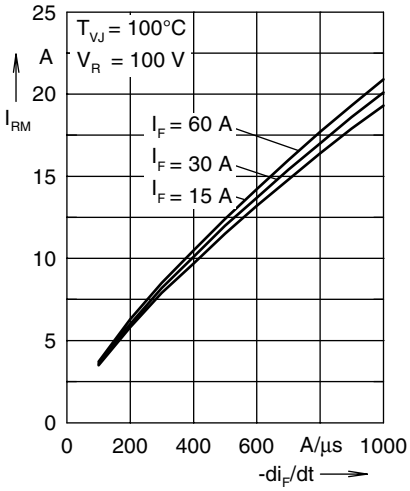

Fig.3 Peak reverse current I_{RM} versus $-di_F/d$

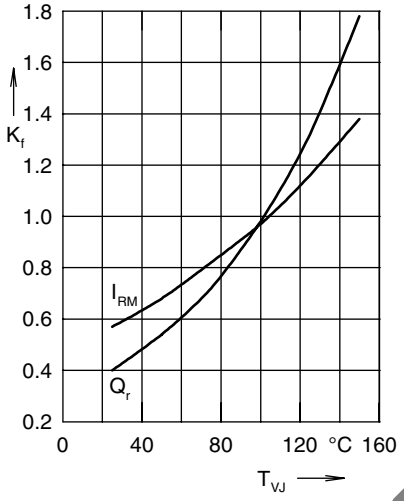

Fig.4 Dynamic parameters Q_{rr}; I_{RM} versus T_{vj}

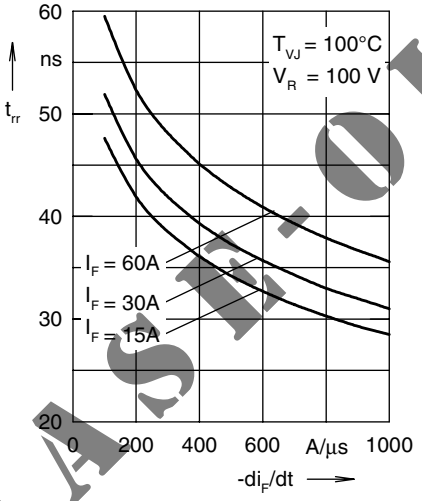

Fig.5 Reverse recovery time t_{rr} versus $-di_F/dt$

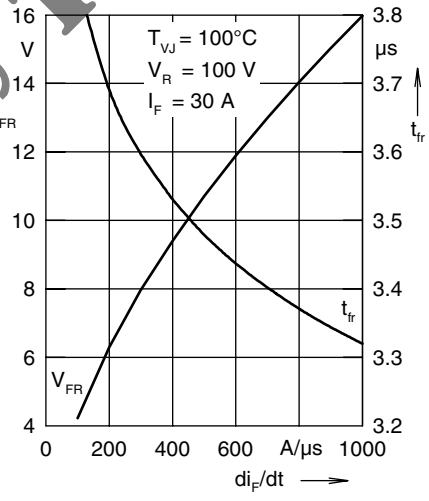

Fig.6 Peak forward voltage V_{FR} & forw. recov. time t_{fr} vs. $-di_F/dt$

NOTE: Fig. 2 to Fig. 6 shows typical values

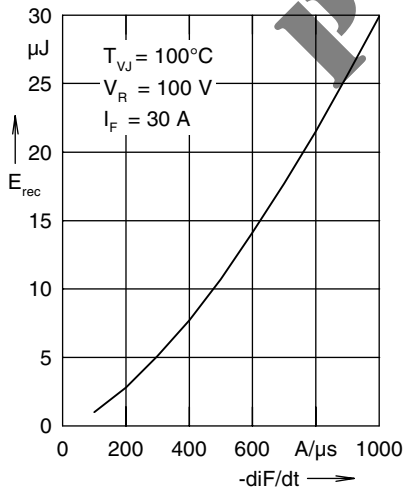

Fig. 7 Recovery energy E_{rec} versus $-di_F/dt$

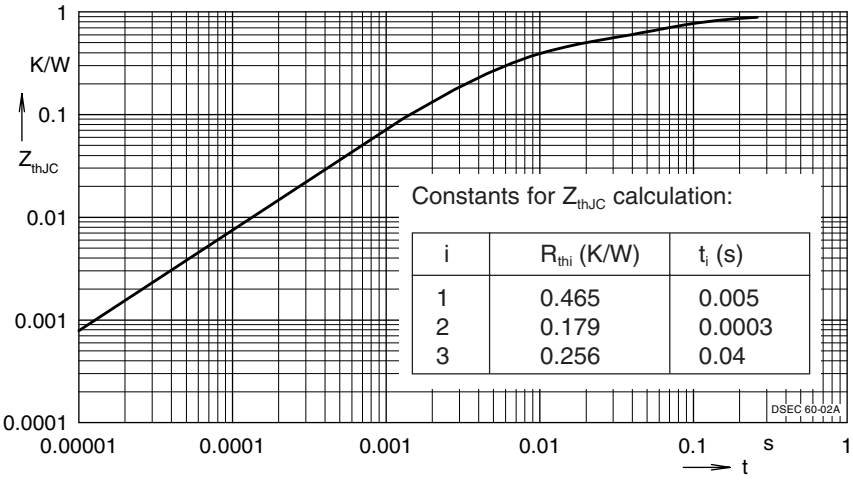

Fig.8 Transient thermal resistance junction to case