



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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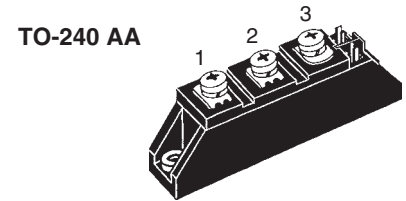
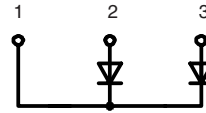
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Fast Recovery Epitaxial Diode (FRED) Module

$$\begin{aligned} V_{RRM} &= 600 \text{ V} \\ I_{FAV} &= 95 \text{ A} \\ t_{rr} &= 35 \text{ ns} \end{aligned}$$

V_{RSM} V	V_{RRM} V	Type
600	600	MPK 95-06 DA



Symbol	Conditions	Maximum Ratings	
I_{FRMS} I_{FAV} ①	$T_C = 110^\circ\text{C}$; sine 180°	200 95	A A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	1200	A
	$t = 8.3 \text{ ms}$ (60 Hz), sine	1280	A
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	1070	A
	$t = 8.3 \text{ ms}$ (60 Hz), sine	1140	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	7200	A ² s
	$t = 8.3 \text{ ms}$ (60 Hz), sine	6900	A ² s
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz), sine	5700	A ² s
	$t = 8.3 \text{ ms}$ (60 Hz), sine	5500	A ² s
T_{VJ}		-40...+150	°C
T_{stg}		-40...+125	°C
P_{tot}	$T_C = 25^\circ\text{C}$	215	W
V_{ISOL}	50/60 Hz, RMS; $t = 1 \text{ s}$	3600	V~
M_d	Mounting/Terminal torque (M5)	2.5-4	Nm
d_s	Creep distance on surface	12.7	mm
d_A	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s ²
Weight		90	g

Features

- International standard package with DCB ceramic base plate
- Planar passivated chips
- Short recovery time
- Low switching losses
- Soft recovery behaviour
- Isolation voltage 3600 V~

Applications

- Antiparallel diode for high frequency switching devices
- Free wheeling diode in converters and motor control circuits
- Inductive heating and melting
- Uninterruptible power supplies (UPS)
- Ultrasonic cleaners and welders

Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Symbol	Conditions	Characteristic Values (per diode)	
		typ.	max.
I_R	$V_R = V_{RRM}$	$T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$	1.3 5 mA
V_F	$I_F = 50 \text{ A}$;	$T_{VJ} = 125^\circ\text{C}$	1.22 V
		$T_{VJ} = 25^\circ\text{C}$	1.73 V
	$I_F = 100 \text{ A}$;	$T_{VJ} = 125^\circ\text{C}$	1.40 V
		$T_{VJ} = 25^\circ\text{C}$	1.89 V
V_{T0}	For power-loss calculations only		0.98 V
r_T	$T_{VJ} = 150^\circ\text{C}$		2.3 mΩ
R_{thJC}	DC current		0.575 K/W
R_{thCH}	DC current	0.1	K/W
t_{rr}	$I_F = 1 \text{ A}$; $V_R = 30 \text{ V}$; $-di/dt = 300 \text{ A}/\mu\text{s}$	$T_{VJ} = 25^\circ\text{C}$	35 ns
I_{RM}	$I_F = 130 \text{ A}$; $V_R = 100 \text{ V}$; $-di/dt = 100 \text{ A}/\mu\text{s}$	$T_{VJ} = 25^\circ\text{C}$	4 A
		$T_{VJ} = 100^\circ\text{C}$	5.5 6.8 A

① I_{FAV} rating includes reverse blocking losses at T_{VJM} , $V_R = 0.6 V_{RRM}$, duty cycle $d = 0.5$

Data according to IEC 60747 and per diode unless otherwise specified

Dimensions in mm (1 mm = 0.0394")

