

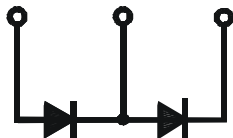
Fast Recovery Epitaxial Diode (FRED) Module

PSKD 200E

I_{FAV} = 312 A
 V_{RRM} = 800-1200V

Preliminary Data Sheet

V_{RSM} V	V_{RRM} V	Type
800	800	PSKD 200E/08
1000	1000	PSKD 200E/10
1200	1200	PSKD 200E/12



Symbol	Test Conditions			Maximum Ratings	
I_{FAV}	T _C = 70°C			312	A
I_{FSM}	T _{VJ} = 45°C	t = 10 ms	(50 Hz), sine	3200	A
	V _R = 0	t = 8.3 ms	(60 Hz), sine	3500	A
	T _{VJ} = T _{VJM}	t = 10 ms	(50 Hz), sine	2900	A
	V _R = 0	t = 8.3 ms	(60 Hz), sine	3200	A
∫ i² dt	T _{VJ} = 45°C	t = 10 ms	(50 Hz), sine	51200	A ² s
	V _R = 0	t = 8.3 ms	(60 Hz), sine	50800	A ² s
	T _{VJ} = T _{VJM}	t = 10 ms	(50 Hz), sine	42000	A ² s
	V _R = 0	t = 8.3 ms	(60 Hz), sine	42500	A ² s
T_{VJ}				-40 ... + 150	°C
T_{VJM}				150	°C
T_{stg}				-40 ... + 125	°C
V_{ISOL}	50/60 HZ, RMS	t = 1 min		2500	V ~
	I _{ISOL} ≤ 1 mA	t = 1 s		3000	V ~
M_d	Mounting torque		(M6)	5	Nm
	Terminal connection torque		(M6)	5	Nm
Weight	typ.			270	g

Features

- Package with screw terminals
- Isolation voltage 3000 V~
- Planar glasspassivated chips
- Short recovery time
- Low forward voltage drop
- Short recovery behaviour
- UL registered, E 148688

Applications

- Inductive heating and melting
- Free wheeling diode in converters and motor control circuits
- 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	Test Conditions	Characteristic Value
I_R	V _R = V _{RRM} T _{VJ} = 25°C	≤ 3.4 mA
	V _R = V _{RRM} T _{VJ} = T _{VJM}	≤ 35 mA
V_F	I _F = 200 A T _{VJ} = 25°C	≤ 1.55 V
t_{rr}	T _{VJ} = 25°C	typ. 150 ns
V_{TO}	For power-loss calculations only	0.3 V
r_T	T _{VJ} = T _{VJM}	0.75 mΩ
R_{thJC}	per diode; DC current	0.28 K/W
	per module	0.14 K/W
R_{thJH}	per diode; DC current	0.38 K/W
	per module	0.19 K/W
d_S	Creeping distance on surface	10 mm
d_A	Creeping distance in air	9.4 mm
a	Max. allowable acceleration	50 m/s ²

Package, style and outline

Dimensions in mm (1mm = 0.0394")

