

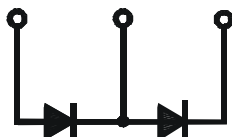
Fast Recovery Epitaxial Diode (FRED) Module

PSKD 200E

$I_{FAV} = 408 \text{ A}$
 $V_{RRM} = 200\text{-}600\text{V}$

Preliminary Data Sheet

V_{RSM} V	V_{RRM} V	Type
200	200	PSKD 200E/02
400	400	PSKD 200E/04
600	600	PSKD 200E/06



Symbol	Test Conditions			Maximum Ratings	
I_{FAV}	T _C = 70°C			408	A
I_{FSM}	T _{VJ} = 45°C	t = 10 ms	(50 Hz), sine	4000	A
	V _R = 0	t = 8.3 ms	(60 Hz), sine	4400	A
	T _{VJ} = T _{VJM}	t = 10 ms	(50 Hz), sine	3600	A
	V _R = 0	t = 8.3 ms	(60 Hz), sine	3900	A
∫ i² dt	T _{VJ} = 45°C	t = 10 ms	(50 Hz), sine	80000	A ² s
	V _R = 0	t = 8.3 ms	(60 Hz), sine	80300	A ² s
	T _{VJ} = T _{VJM}	t = 10 ms	(50 Hz), sine	64800	A ² s
	V _R = 0	t = 8.3 ms	(60 Hz), sine	63100	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

Symbol	Test Conditions	Characteristic Value
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^\circ\text{C}$	$\leq$ 5.0 mA
	$V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$	$\leq$ 30 mA
V_F	$I_F = 200\text{ A}$ $T_{VJ} = 25^\circ\text{C}$	$\leq$ 1.25 V
t_{rr}	$T_{VJ} = 25^\circ\text{C}$	typ. 150 ns
V_{TO}	For power-loss calculations only	0.25 V
r_T	$T_{VJ} = T_{VJM}$	0.43 $\text{m}\Omega$
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

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

Package, style and outline

Dimensions in mm (1mm = 0.0394")

