

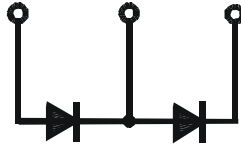
Fast Recovery Epitaxial Diode (FRED) Module

PSKD 75E

$$\begin{aligned} I_{FAV} &= 75 \text{ A} \\ V_{RRM} &= 800\text{-}1200 \text{ V} \end{aligned}$$

Preliminary Data Sheet

V_{RSM} V	V_{RRM} V	Type
800	800	PSKD 75E/08
1000	1000	PSKD 75E/10
1200	1200	PSKD 75E/12



Symbol	Test Conditions			Maximum Ratings	
I_{FAV}	T _C = 85°C			75	A
I_{FSM}	T _{VJ} = 45°C	t = 10 ms	(50 Hz), sine	1000	A
	V _R = 0	t = 8.3 ms	(60 Hz), sine	1100	A
	T _{VJ} = T _{VJM}	t = 10 ms	(50 Hz), sine	900	A
	V _R = 0	t = 8.3 ms	(60 Hz), sine	990	A
∫ i² dt	T _{VJ} = 45°C	t = 10 ms	(50 Hz), sine	5000	A ² s
	V _R = 0	t = 8.3 ms	(60 Hz), sine	5020	A ² s
	T _{VJ} = T _{VJM}	t = 10 ms	(50 Hz), sine	4050	A ² s
	V _R = 0	t = 8.3 ms	(60 Hz), sine	4060	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		(M5)	5	Nm
	Terminal connection torque		(M5)	5	Nm
Weight	typ.			160	g

Symbol	Test Conditions	Characteristic Value
I_R	$V_R = V_{RRM}$ $T_{VJ} = 25^{\circ}\text{C}$	$\leq 250 \mu\text{A}$
	$V_R = V_{RRM}$ $T_{VJ} = T_{VJM}$	$\leq 2.5 \text{ mA}$
V_F	$I_F = 75 \text{ A}$ $T_{VJ} = 25^{\circ}\text{C}$	$\leq 2.0 \text{ V}$
t_{rr}	$T_{VJ} = 25^{\circ}\text{C}$, $I_F = 1\text{A}$; -di/dt = 100 A/μs; $V_R = 30\text{V}$	typ. 100 ns
V_{TO}	For power-loss calculations only	0.7 V
r_T	$T_{VJ} = T_{VJM}$	1.55 mΩ
R_{thJC}	per diode; DC current	0.85 K/W
	per module	0.43 K/W
R_{thJK}	per diode; DC current	1.0 K/W
	per module	0.5 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")

