FRD05607516

FAST RECOVERY DIODE CHIP

APPLICATIONS

- Switch Mode Power Supplies.
- Motor Control.
- Free Wheel/Antiparallel Diode For Use With IGBT And Other Power Switches In Inverters And Welding Applications.

TYPICAL KEY PARAMETERS

V_{RRM}	1600V
I_F	75A
t_{rr}	270ns

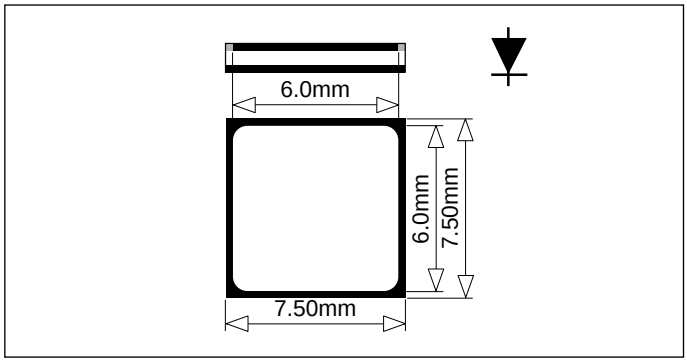
FEATURES

- Planar Structure With "HIVOX" Semi-Insulating Polysilicon Junction Passivation And Soft Recovery Characteristics.
- Positive Temperature Coefficient Of V_F.

VOLTAGE RATINGS

Type Number	Repetitive Peak Reverse Voltage V_{RRM} V	Conditions
FRD05607516	1600	T_j = 125˚C

CHIP DETAILS



Typical chip thickness: 300µm.

Wire sizes: 8 ≥ bondwires 300µm Ø.

Composition of wire: 99.999% Aluminium.

Back metal:- Aluminium, Titanium, Nickel, Silver.

T_{max} for chip **NOT** to exceed 275˚C for more than 15 minutes during soldering, using 96S solder.

Packing for shipment is either membrane or waffle tray.

Static sensitive device - observe static handling precautions.

CURRENT RATING

Symbol	Parameter	Conditions	Max.	Units
I_F	Forward current	-	75	A

All ratings given assuming suitable mountdown of chip.

THERMAL RATING

Symbol	Parameter	Conditions	Max.	Units
T_j	Junction temperature	-	150	˚C
T_{stg}	Storage temperature range	-	-55 to +150	˚C

CHARACTERISTICS

Symbol	Parameter	Conditions	Typ.	Max.	Units
V_{FM}	Forward voltage	At I_F = 75A peak, T_j = 25˚C	2.4	2.8	V
		At I_F = 75A peak, T_j = 125˚C	2.5	3	V
I_{RM}	Peak reverse current	At V_{RRM}, T_j = 125˚C	-	1	mA
t_{rr}	Reverse recovery time	I_F = 75A, di_{RR}/dt = 300A/µs	270	-	ns
Q_{RR}	Recovered charge	T_j = 25˚C, V_R = 50%V_{RRM}	8.5	-	µC
t_{rr}	Reverse recovery time	I_F = 75A, di_{RR}/dt = 300A/µs	420	-	ns
Q_{RR}	Recovered charge	T_j = 125ºC, V_R = 50%V_{RRM}	15.4	-	µC

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