

DIODE MODULE (F.R.D.)

FRD/FDS100BA60



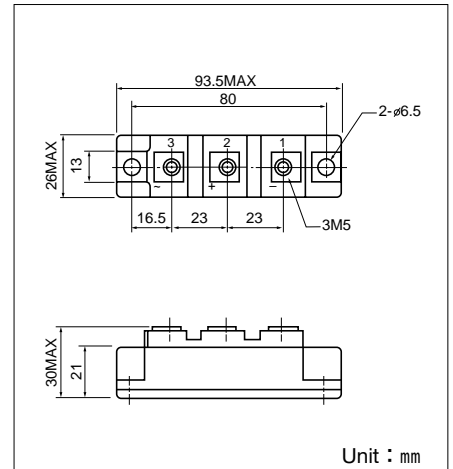
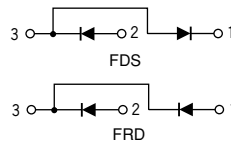
UL;E76102 (M)

FRD (FDS)100BA is a high speed (fast recovery) dual diode module designed for high power switching application. FRD (FDS) 100BA is suitable for high frequency application requiring low loss and high speed control.

- High Speed $t_{rr} \leq 100\text{ns}$
- $I_{F(AV)}$ 100A (each device)
- Isolated mounting construction.
- High Surge Capability

(Applications)

Switching Power Supply, Inverter Welding Power Supply
Power Supply for Telecommunication



Maximum Ratings

($T_j = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Item	Ratings	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	600	V
$V_{R(DC)}$	D.C. Reverse Voltage	480	V

Symbol	Item	Conditions	Ratings	Unit	
I_F	Forward Current	D.C. $T_c : 94^\circ\text{C}$	100	A	
I_{FSM}	Surge Forward Current	$\frac{1}{2}$ cycle, 60Hz, peak value, non-repetitive	2000	A	
I^2t	I^2t	Value for One cycle of surge current	16700	A^2S	
T_j	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$	
T_{stg}	Storage Temperature		-40 to +125	$^\circ\text{C}$	
V_{iso}	Isolation Breakdown Voltage (R.M.S.)	A.C. 1 minute	2500	V	
	Mounting Torque	Mounting(M6)	Recommended Value 2.5-3.9 (25-40)	4.7 (48)	Nm ($\text{kgf}\cdot\text{cm}$)
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass			170	g

Electrical Characteristics

Symbol	Item	Conditions	Ratings		Unit
			Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current, max.	$V_R = V_{RRM}, T_j = 125^\circ\text{C}$		100	mA
V_{FM}	Forward Voltage Drop, max.	Forward current 100A, Inst. measurement	1.15	1.3	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case		0.4	$^\circ\text{C}/\text{W}$
t_{rr}	Reverse Recovery Time, max.	$I_F = 100\text{A}, di/dt = -100\text{A}/\mu\text{s}$	85	100	ns