FDF25CA100/120

UL;E76102 (M)

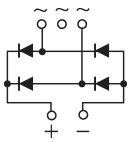
FDF25CA is a high speed dual diode module designed for high power switching application. **FDF25CA** is suitable for high frequency application requiring low loss and high speed control.

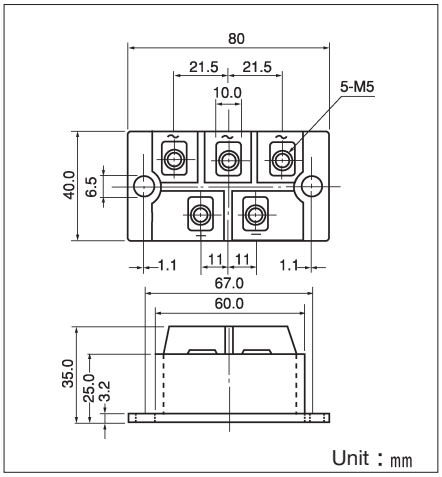
- High Speed $t_{rr} \leqq 200$ns
- I_D=25A
- Isolated mounting construction.
- High Surge Capability

(Applications)

Switching Power Supply, Inverter Welding Power Supply

Power Supply for Telecommunication





■Maximum Ratings

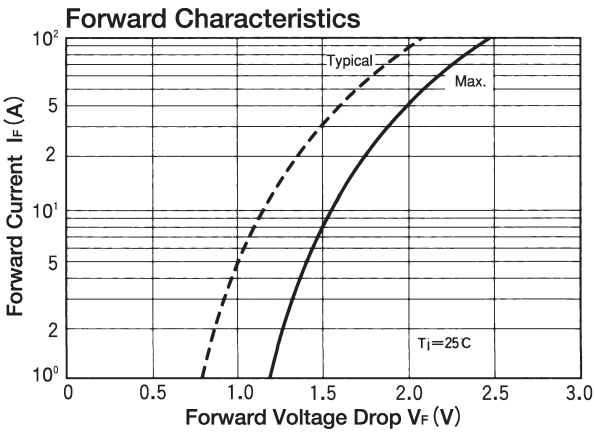
(Tj=25℃)

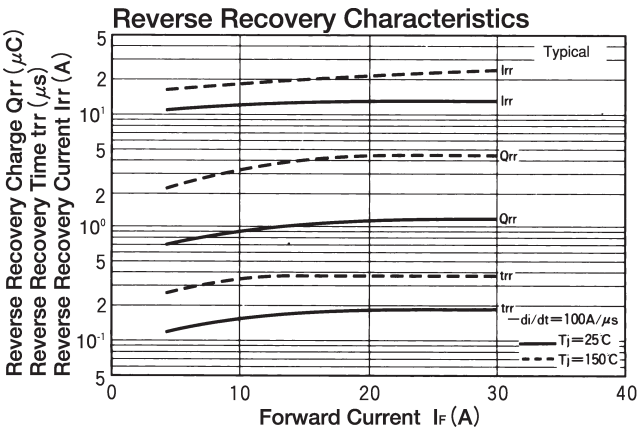
Symbol	Item	Ratings		Unit
		FDF25CA100	FDF25CA120	
V_{RRM}	Repetitive Peak Reverse Voltage	1000	1200	V
$V_{R(DC)}$	D.C. Reverse Voltage	800	960	V

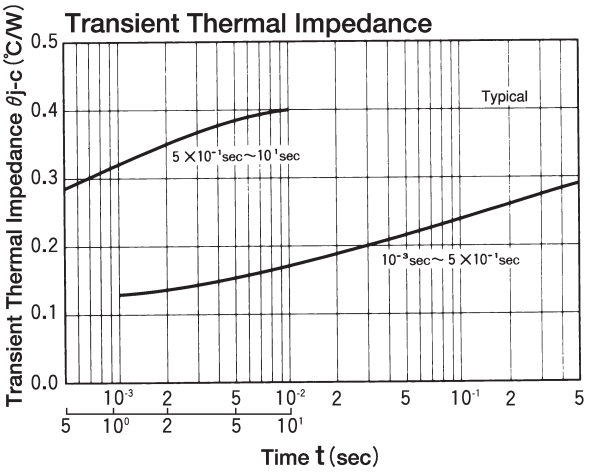
Symbol	Item		Conditions	Ratings	Unit
I_D	Output Current (D.C.)		Three phase full wave. Tc : 114℃	25	A
I_{FSM}	Surge Forward Current		½ cycle, 60Hz, peak value, non-repetitive	400	A
I^2t	I^2t		Value for one cycle of surge current	660	A^2S
Tj	Operating Junction Temperature			−40～+150	℃
Tstg	Storage Temperature			−40～+125	℃
V_{ISO}	Isolation Breakdown Voltage (R.M.S.)		A.C. 1 minute	2500	V
	Mounting Torque	Muonting (M6)	Recommended Value 2.5～3.9 (25～40)	4.7 (48)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5～2.5 (15～25)	2.7 (28)	
	Mass		Typical Value	200	g

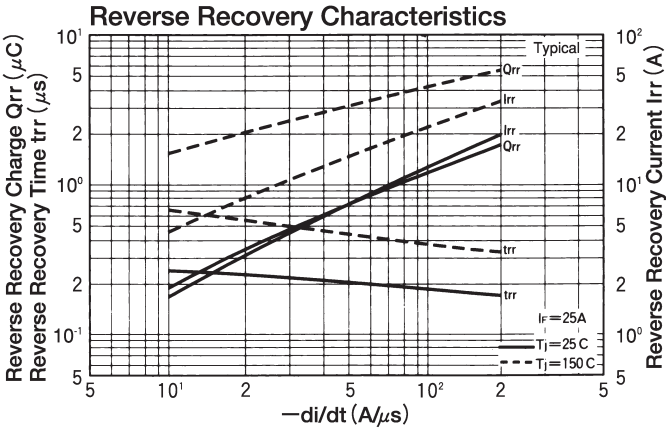
■Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	$V_R=V_{RRM}$, T_j=150℃			2.0	mA
V_{FM}	Forward Voltage Drop	I_{FM}=25A, Inst. measurement			1.8	V
trr	Reverse Recovery Time, max.	I_F=25A, −di/dt=100A/μs			200	ns
Rth (j-c)	Thermal Impedance	Junction to case			0.4	℃/W


Forward Characteristics
Typical
Max.
Tj=25℃
Forward Current IF (A)
Forward Voltage Drop VF (V)


Reverse Recovery Characteristics
Typical
Irr
Qrr
trr
di/dt=100A/μs
Tj=25℃
Tj=150℃
Reverse Recovery Charge Qrr (μC)
Reverse Recovery Time trr (μs)
Reverse Recovery Current Irr (A)
Forward Current IF (A)


Transient Thermal Impedance
Typical
5×10⁻¹sec～10¹sec
10⁻³sec～5×10⁻¹sec
Transient Thermal Impedance θj-c (℃/W)
Time t (sec)


Reverse Recovery Characteristics
Typical
Qrr
Irr
trr
IF=25A
Tj=25℃
Tj=150℃
Reverse Recovery Charge Qrr (μC)
Reverse Recovery Time trr (μs)
Reverse Recovery Current Irr (A)
—di/dt (A/μs)