

# FAST RECOVERY DIODE MODULE

## FDS100CA120

UL;E76102 (M)

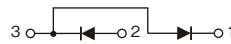
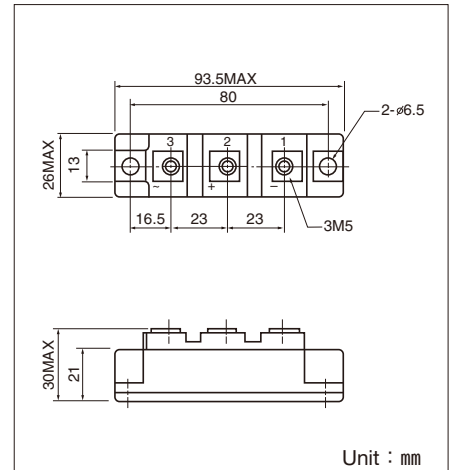
- Fast and isolated diode
- For high power switching application
- Low loss and High speed control
- Two diode chips in a package

### <Features>

- High speed ( $t_{rr} \leq 300\text{ns}$ )
- Average Forward Current (Two Diodes) (100A)
- Easy to installation as isolated
- High surge capability

### <Applications>

- Switching Power Supply
- Inverter Welding Power Supply
- Power source for communications etc.



### ■ Maximum Ratings

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

Symbol	Item	Ratings		Unit
		FDS100CA120		
$V_{RRM}$	Repetitive Peak Reverse Voltage	1200		V
$V_{R(DC)}$	D.C. Reverse Voltage	960		V

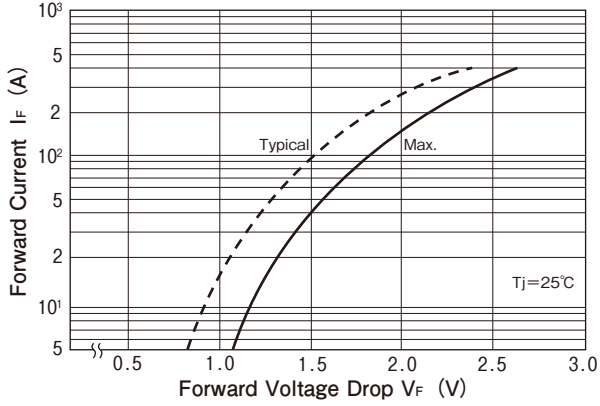
Symbol	Item	Conditions	Ratings	Unit	
$I_{F(AV)}$	Average Forward Current	D.C. $T_c = 78^\circ\text{C}$	100	A	
$I_{FSM}$	Surge Forward Current	$\frac{1}{2}$ cycle, 60Hz, Peak value, non-repetitive	2000	A	
$I^2t$	$I^2t$ (for fusing)	Value for one cycle surge current	16600	$\text{A}^2\text{s}$	
$T_j$	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature		-40 to +125	$^\circ\text{C}$	
$V_{iso}$	Isolation Voltage	A.C., RMS 1 minute	2500	V	
	Mounting torque	Mounting (M6)	Recommended Value 2.5 to 3.9 (25 to 40)	4.7 (48)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5 to 2.5 (15 to 25)	2.7 (28)	
	Mass		170	g	

### ■ Electrical Characteristics

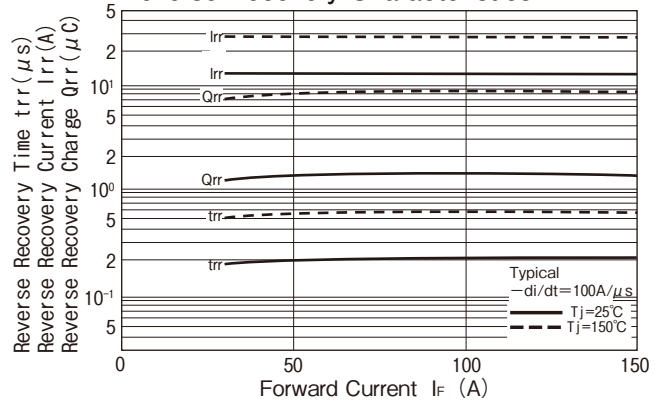
( $T_j = 25^\circ\text{C}$  unless otherwise specified)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
$I_{RRM}$	Repetitive Peak Reverse Current	$V_R = V_{RRM}$ , $T_j = 150^\circ\text{C}$			5.0	mA
$V_{FM}$	Forward Voltage Drop	$I_F = 100\text{A}$ , Inst. Measurement			1.8	V
$t_{rr}$	Reverse Recovery Time	$I_F = 100\text{A}$ , $-di/dt = 100\text{A}/\mu\text{s}$			300	ns
$R_{th(j-c)}$	Thermal Resistance	Junction to case			0.4	$^\circ\text{C}/\text{W}$

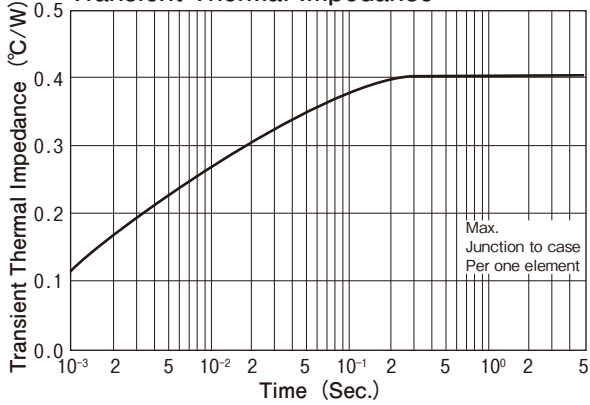
### Forward Characteristics



### Reverse Recovery Characteristics



### Transient Thermal Impedance



### Reverse Recovery Characteristics

