

FAST RECOVERY DIODE MODULE

FDS100CA120

UL;E76102 (M)

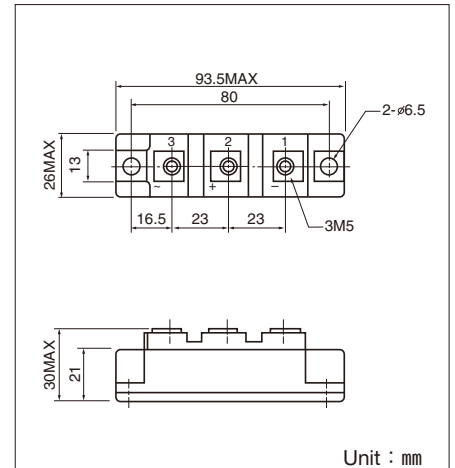
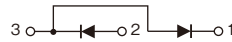
- Fast and isolated diode
- For high power switching application
- Low loss and High speed control
- Two diode chips in a package

〈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

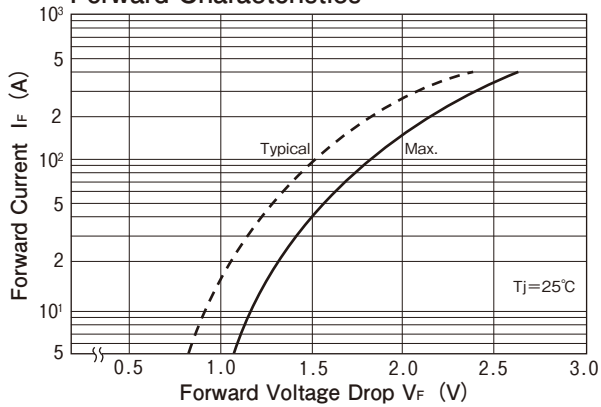
Symbol	Item		Conditions	Ratings	Unit
$I_F(AV)$	Average Forward Current		D.C. $T_c = 78^\circ\text{C}$	100	A
I_{FSM}	Surge Forward Current		$\frac{1}{2}$ cycle, 60Hz, Peak value, non-repetitive	2000	A
I^2t	I^2t (for fusing)		Value for one cycle surge current	16600	A^2s
T_j	Operating Junction Temperature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

■Electrical Characteristics

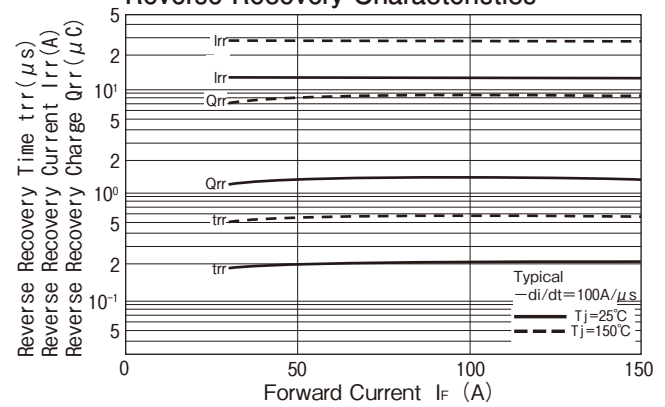
($T_j = 25^\circ\text{C}$ unless otherwise specified)

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	$^\circ\text{C}/\text{W}$

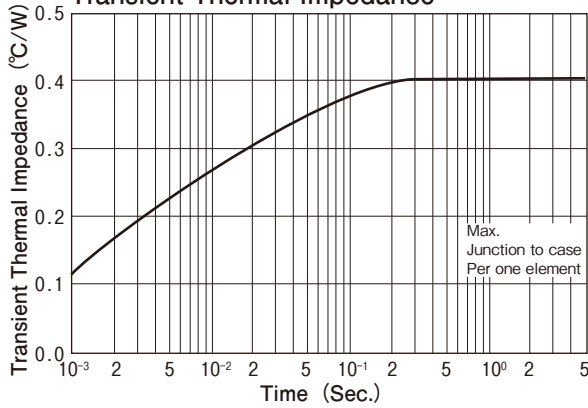
Forward Characteristics



Reverse Recovery Characteristics



Transient Thermal Impedance



Reverse Recovery Characteristics

