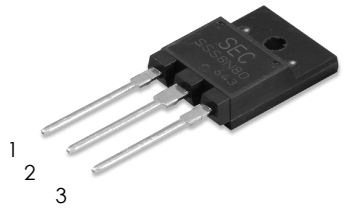
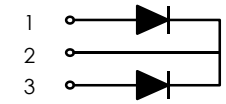
SDF30U60DN POWER RECTIFIER

FEATURES

* High Voltage and High Reliability
* High Speed Switching (Trr=70ns)
* Low V_F in Turn on (V_F=1.8V at I_F=30A)

TO-3PF





APPLICATIONS

* General Purpose
* Switching Mode Power Supply
* Free Wheeling Diode for Motor Application
* Power Switching Circuit

MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Repetitive Reverse Voltage	V_{RRM}	600	V
Average Rectified Forward Current, T_C=100 °C	$I_{F(AV)}$	30	A
Non-repetitive Peak Surge Current (Half-wave, Single Phase, 60Hz)	I_{FSM}	180	A
Operating Junction and Storage Temperature	T_J, T_{STG}	-65 ~ 150	°C

THERMAL CHARACTERISTICS

Thermal Resistance- Junction to Case	$R_{\theta JC}$	0.7	°C/W

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ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Typ	Max	Units
Maximum Instantaneous Forward Voltage (1)	V_F			
(I_F = 30A, T_C = 100 .)		-	2.1	V
(I_F = 30A, T_C = 25 .)		1.8	2.3	
Maximum Instantaneous Reverse Current (1)	I_R			
(Rated DC Voltage, T_C = 100 .)		30	150	μA
(Rated DC Voltage, T_C = 25 .)		3	15	
Maximum Reverse Recovery Time	trr	70	90	ns
(I_F = 30A, di/dt = 200A/μs)	Irr	6	8	A
	Qrr	210	360	nC

(1) Pulse Test : Pulse Width = 300μs, Duty Cycle X2.0%

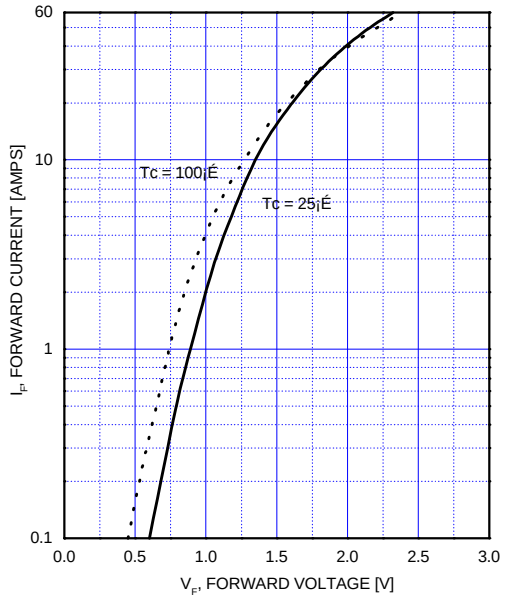

Fig.1 Typical Forward Voltage Drop vs. Forward Current

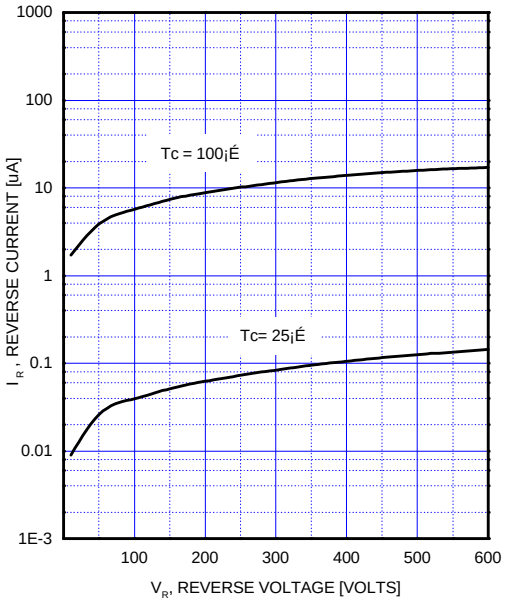

Fig.2 Reverse Voltage vs. Reverse Current

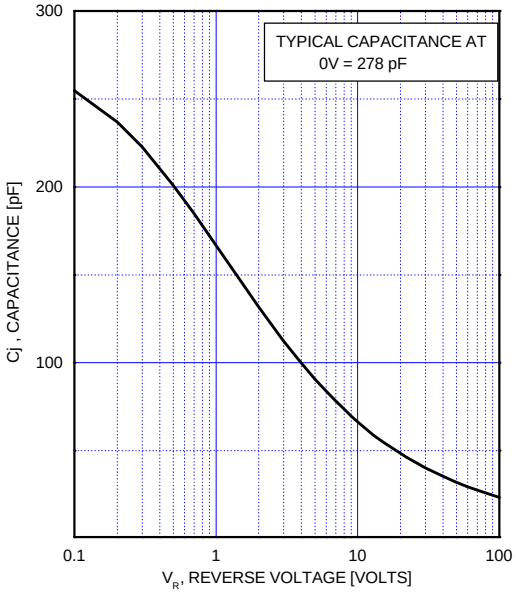

Fig.3 Typical Capacitance

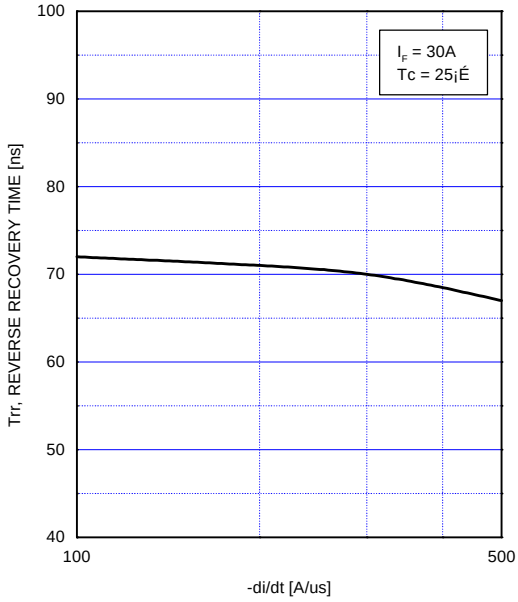

Fig.4 Typical Reverse Recovery Time vs. di/dt

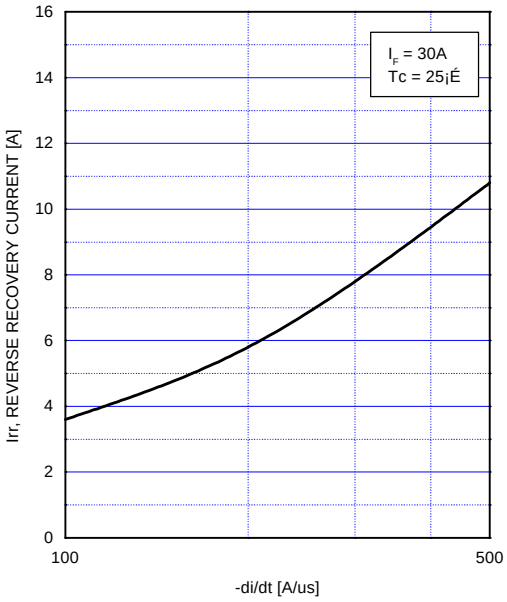

Fig.5 Typical Reverse Recovery Current vs. di/dt

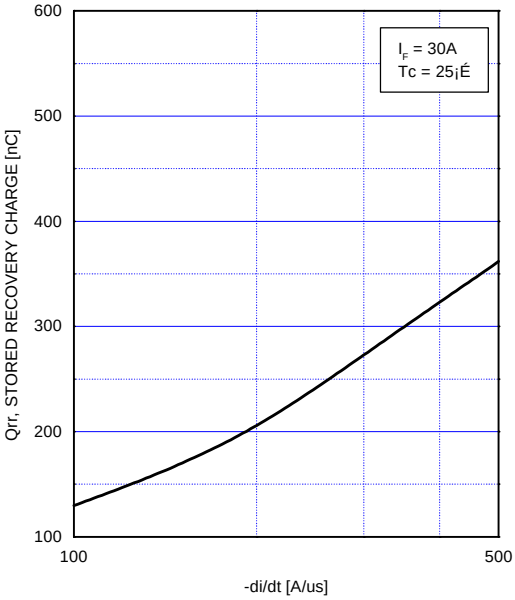

Fig.6 Typical Stored Charge vs. di/dt

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