SDP15U20DN

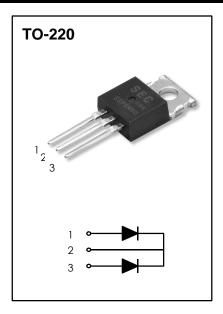
FEATURES

- * Ultrafast with Soft Recovery
- (Trr < 40ns)
- * Low Forward Voltage (V_F =0.98V at I_F =15A)

APPLICATIONS

- * Power Switching Circuits
- * Output rectifiers
- * Freewheeling Diodes
- * Switching Mode Power Supply

POWER RECTIFIER



MAXIMUM RATINGS

Rating	Symbol	Value	Units
Peak Repetitive Reverse Voltage	V _{RRM}	200	V
Average Rectified Forward Current, T _c =100.	I _{F(AV)}	15	А
Non-repetitive Peak Surge Current	I _{FSM}	150	А
(Half-wave, Single Phase, 60Hz)			
Operating Junction and Storage Temperature	T _J , T _{STG}	-65 ~ 150	°C

THERMAL CHARACTERISTICS

Thermal Resistance - Junction to Case	$R_{ ext{ heta}JC}$	3.1	°C/W
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ELECTRICAL CHARACTERISTICS

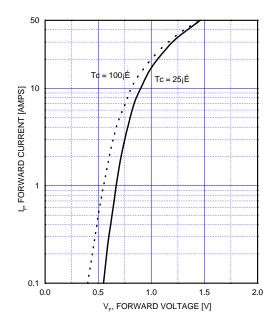
Characteristics	Symbol	Min	Тур	Max	Units
Maximum Instantaneous Forward Voltage (1)	V _F				
(I _F = 15A, T _C = 100 °C)		-	-	1.0	V
(I _F = 15A, T _C = 25 °C)		-	- 1.2		
Maximum Instantaneous Reverse Current (1)	I _R				
(Rated DC Voltage, $T_c = 100 \ ^{\circ}C$)		-	-	150	μA
(Rated DC Voltage, $T_c = 25 \ ^{\circ}C$)		-	-	15	
Maximum Reverse Recovery Time	trr	-	-	40	ns
(I _F = 15A, di/dt = -200A/µs)	Irr	-	-	3.5	А
	Qrr	-	-	70	nQ
Avalanche Energy	W_{AVL}	0.5	-	-	mJ

(1) Pulse Test : Pulse Width = 300 $\mu s,$ Duty Cycle $\leq 2.0\%$



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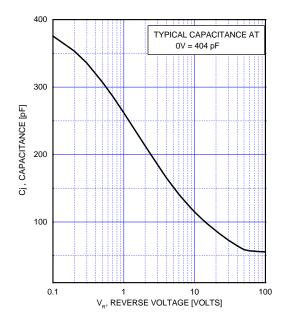
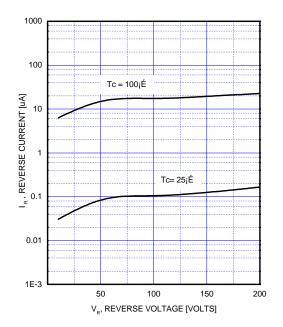
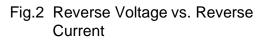
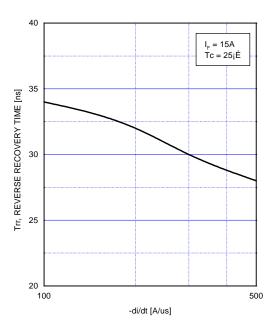
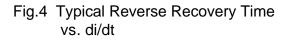


Fig.3 Typical Capacitance











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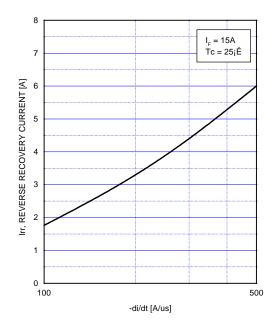


Fig.5 Typical Reverse Recovery Current vs. di/dt

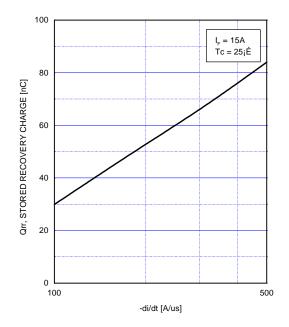


Fig.6 Typical Stored Charge vs. di/dt



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