

SFF250M-1

SFF250Z-1

PRELIMINARY



SOLID STATE DEVICES, INC

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ELECTRICAL CHARACTERISTICS @ $T_J=25^\circ\text{C}$ (Unless Otherwise Specified)

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250 μ A)		BVDSS	200	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=60% Rated ID)		RDS(on)	---	0.07	0.075	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS=10 V)		ID(on)	30	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250 μ A)		VGS(th)	2	3	4	V
Forward Transconductance (VDS > ID(on) X RDS(on) Max, IDS=60% rated ID)		gfs	13	15	---	S(τ)
Zero Gate Voltage Drain Current (VDS=80% rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125 $^\circ$ C)		IDSS	---	---	250 1000	μ A
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated VGS	IGSS	---	---	100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS=10 Volts 50% rated VDS Rated ID	Qg Qgs Qgd	---	80 12 44	120 20 65	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS 50% rated ID RG= 6.2 Ω	td(on) tr td(off) tf	---	20 120 70 80	30 180 100 120	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, TJ=25 $^\circ$ C)		VSD	---	1.1	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25 $^\circ$ C IF=10A di/dt=100 A/ μ sec	t _{rr} QRR	140 1.8	300 3.8	630 8	nsec μ C
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	---	2600 650 150	---	pF

 SAFE OPERATING AREA (S.O.A.)
 TC = 25 C, D.C. CONDITION
