

SFF9240-28

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)	BV _{DSS}	-200	---	---	V
Drain to Source on State Resistance (VGS= -10 V, ID= -6 A)	R _{DS(on)}	---	0.35	0.50	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS= -10 V)	ID(on)	-11	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=-250 μ A)	VGS(th)	-2.0	---	-4.0	V
Forward Transconductance (VDS \geq ID(on) X RDS(on) max., IDS= -6.0 A)	gfs	4	6	---	S(τ)
Zero Gate Voltage Drain Current (VDS=max 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	VGS= \pm 20V IGSS	---	---	-100 100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	VGS= -10 Volts 80% rated VDS ID= -11 A Qg Qgs Qgd	---	38 8.0 21	90 ---	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD= -100 V ID= -7 A RG= 9.1 Ω td(on) tr td(off) tf	---	13 45 29 29	35 85 85 65	nsec
Diode Forward Voltage (IS= -11 A, VGS=0 V, TJ=25 $^\circ$ C)	VSD	---	---	-4.6	V
Diode Reverse Recovery Time Reverse Recovery Charge	TJ=25 $^\circ$ C IF=-11 A di/dt=100 A/ μ sec trr QRR	---	270 2.0	---	nsec μ C
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS= -25 Volts f= 1 MHz Ciss Coss Crss	---	1100 375 150	1300 450 250	pF

SAFE OPERATING AREA (S.O.A.)
 $T_C = 25^\circ\text{C}$, D.C. CONDITION

