

SFF440M
SFF440Z

SOLID STATE DEVICES, INC

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ELECTRICAL CHARACTERISTICS @ T_J=25 C (Unless Otherwise Specified)

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250 μ A)		BVDSS	500	---	---	V
Drain to Source on State Resistance (VGS=10 V, ID=60% Rated ID)		RDS(on)	---	0.70	0.85	Ω
On State Drain Current (VDS > ID(on) X RDS(on) Max, VGS=10 V)		ID(on)	8	---	---	A
Gate Threshold Voltage (VDS=VGS, ID=250 μ A)		VGS(th)	2.0	---	4.0	V
Forward Transconductance (VDS \geq 50V, IDS=60% rated ID)		gfs	4.9	7.4	---	S(\bar{v})
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		IDSS	---	---	250 1000	μA
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 80% rated VDS ID=8 A	Qg Qgs Qgd	---	42 6 22	63 10 32	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	VDD=50% rated VDS ID= 8 A RG=9.1 Ω RD=30 Ω	td(on) tr td(off) tf	---	14 23 50 20	21 35 74 30	nsec
Diode Forward Voltage (IS=rated ID, VGS=0 V, T _J =25°C)		VSD	---	---	2.0	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25°C IF=rated ID di/dt=100 A/ μ sec	trr QRR	210 2	460 4.2	970 8.9	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	VGS=0 Volts VDS=25 Volts f= 1 MHz	Ciss Coss Crss	---	1300 180 45	---	pF

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.