

SFFX054M
SFFX054Z

PRELIMINARY



SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

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

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (V _{GS} =0 V, I _D =1mA)		BV _{DSS}	60	---	---	V
Drain to Source on State Resistance (V _{GS} =10 V, I _D =60% Rated ID)		R _{DS(on)}	---	0.017	0.022	Ω
On State Drain Current (V _{DS} > I _{D(on)} X R _{DS(on)} Max, V _{GS} =10 V)		I _{D(on)}	35	---	---	A
Gate Threshold Voltage (V _{DS} =V _{GS} , I _D =250μA)		V _{GS(th)}	2.0	2.6	4.0	V
Forward Transconductance (V _{DS} > I _{D(on)} X R _{DS(on)} Max, I _{DS} =35A)		g _{fs}	20	45	---	S(Ω)
Zero Gate Voltage Drain Current (V _{DS} =80%max rated voltage, V _{GS} =0 V) (V _{DS} =80% rated V _{DS} , V _{GS} =0 V, T _A =125° C)		I _{DSS}	---	---	25 250	μA
Gate to Source Leakage Forward Gate to Source Leakage Reverse	At rated V _{GS}	I _{GSS}	---	---	100 -100	nA
Total Gate Charge Gate to Source Charge Gate to Drain Charge	V _{GS} =10 Volts 80% rated V _{DS} Rated ID	Q _g Q _{gs} Q _{gd}	80 10 34	---	180 45 105	nC
Turn on Delay Time Rise Time Turn Off Delay Time Fall Time	V _{DD} =50% rated V _{DS} I _D =35A R _G ≤6.2Ω	t _{d(on)} t _r t _{d(off)} t _f	---	30 20 60 30	33 180 100 100	nsec
Diode Forward Voltage (I _S =rated ID, V _{GS} =0 V, T _J =25° C)		V _{SD}	---	1.1	2.5	V
Diode Reverse Recovery Time Reverse Recovery Charge	T _J =25° C I _F =10A di/dt=100 A/μsec	t _{rr} Q _{RR}	---	---	280 2.2	nsec μC
Input Capacitance Output Capacitance Reverse Transfer Capacitance	V _{GS} =0 Volts V _{DS} =25 Volts f= 1 MHz	C _{iss} C _{oss} C _{rss}	---	4600 2000 340	---	pF

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