TO-220 N MOS N-CHANNEL MOSFET in a TO-220 Plastic Package.

dv/dt

Low gate charge, Fast switching capability, Avalan

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	400	V
Drain Current	I_D(Tc=25)	20	A
Drain Current	I_D(Tc=100)	13	A
Drain Current - Pulsed	I_{DP}	80	A
Gate-Source Voltage	V_{GSS}	±20	V
Single Pulsed Avalanche Energy	E_{AR}	28	mJ
Repetitive Avalanche Energy	E_{AS}	1110	mJ
Peak Diode Recovery dv/dt	dv/dt	4.5	V/ns
Power Dissipation	P_D(Tc=25)	280	W
Junction Temperature Range	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance Junction-Ambient	R_{thJA}	40	/W
Thermal Resistance Junction-Case	R_{thJC}	0.44	/W

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	V_{GS}=0V I_D=250μA	400			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=400V V_{GS}=0V			1.0	μA
		V_{DS}=400V T_C=125			10	
Gate-Body Leakage Current, Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=10A		0.23	0.40	Ω
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=20A			1.5	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		2700		pF
Output Capacitance	C_{oss}			400		
Reverse Transfer Capacitance	C_{rss}			40		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=250V I_D=20A R_G=2.5Ω		100		ns
Turn-On Rise Time	t_r			400		
Turn-Off Delay Time	$t_{d(off)}$			100		
Turn-Off Fall Time	t_f			100		
Total Gate Charge	Q_g	V_{DS}=400V I_D=20A V_{GS}=10V		70		nC
Gate-Source Charge	Q_{gs}			18		
Gate-Drain Charge	Q_{gd}			35		

/ Electrical Characteristic Curve



( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note: