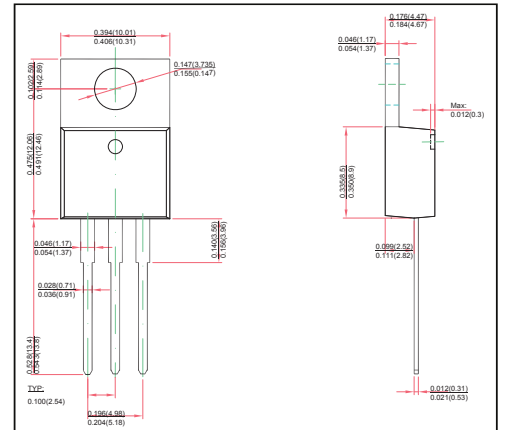


**TO-220-3L Plastic-Encapsulate MOSFETS**
**FEATURE**

- N-Channel Power MOSFET
- High Current Rating
- Lower RDS(on)
- Lower Capacitance
- Lower Total Gate Charge
- Tighter VSD Specifications
- Avalanche Energy Specified

**MECHANICAL DATA**

- Case style:TO-220-3L molded plastic
- Mounting position:any


**MAXIMUM RATINGS AND CHARACTERISTICS**

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	600	V
Gate-Source Voltage	$V_{GS}$	±30	
Continuous Drain Current	$I_D$	8	A
Pulsed Drain Current	$I_{DM}$	32	
Single Pulsed Avalanche Energy (note1)	$E_{AS}$	250	mJ
Power Dissipation	$P_D$	2	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	62.5	°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 ~ +150	°C

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	600			V
Drain-source diode forward voltage(note2)	$V_{SD}$	$V_{GS}=0V, I_S=7A$			1.4	
Zero gate voltage drain current	$I_{DSS}$	$V_{DS}=600V, V_{GS}=0V$			1	μA
Gate-body leakage curren (note2)	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 30V$			±100	nA
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2.0		4.0	V
Static drain-source on-resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=4A$			1.3	Ω
Input capacitance	$C_{iss}$	$V_{DS}=25V, V_{GS}=0V, f=1MHz$			1280	pF
Output capacitance	$C_{oss}$				120	
Reverse transfer capacitance	$C_{rss}$				11	
Turn-on delay time (note3)	$t_{d(on)}$	$V_{DD}=300V, V_{GS}=10V, R_G=25\Omega, I_D=7A$			80	ns
Turn-on rise time (note3)	$t_r$				165	
Turn-off delay time (note3)	$t_{d(off)}$				160	
Turn-off fall time (note3)	$t_f$				120	