

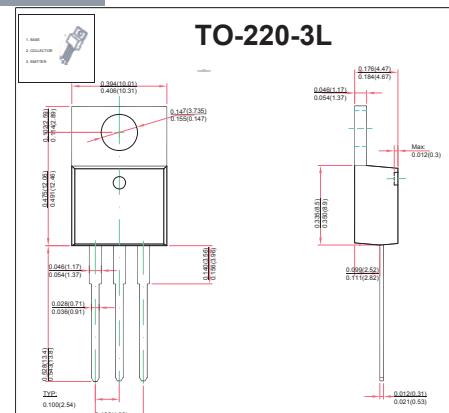
TO-220-3L Plastic-Encapsulate MOSFETS

FEATURE

- Low Crs
- Fast switchin
- Improved dv/dt capability
- 600V N-Channel Power MOSFET

MECHANICAL DATA

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



Dimensions in inches and (millimeters)

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	12	A
Single Pulsed Avalanche Energy (note1)	E _{AS}	790	mJ
Power Dissipation	P _D	2	W
Thermal Resistance from Junction to Ambient	R _{θJA}	62.5	°C/W
Operating Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS T_A=25°C unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250µA	600			V
Drain-source diode forward voltage(note2)	V _{SD}	V _{GS} = 0V, I _D = 12A			1.4	
Zero gate voltage drain current	I _{DSS}	V _{DS} = 600V, V _{GS} = 0V			10	µA
Gate-body leakage current, forward(note2)	I _{GSSF}	V _{DS} = 0V, V _{GS} = 30V			100	nA
Gate-body leakage current, reverse(note2)	I _{GSSR}	V _{DS} = 0V, V _{GS} = -30V			-100	
On characteristics (note2)						
Gate-threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250µA	2.0		4.0	V
Static drain-source on-resistance	R _{D(on)}	V _{GS} = 10V, I _D = 6.0A			0.8	Ω
Dynamic characteristics (note 3)						
Input capacitance	C _{iss}	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz		1800		pF
Output capacitance	C _{oss}			200		
Reverse transfer capacitance	C _{rss}			25		
Switching characteristics(note3)						
Turn-on delay time	t _{d(on)}	V _{DD} = 325V, R _G = 4.7Ω, I _D = 12A		30		ns
Turn-on rise time	t _r			90		
Turn-off delay time	t _{d(off)}			160		
Turn-off fall time	t _f			90		

Notes :

1. L=10mH, I_{AS}=12 A, V_{DD}=50V, R_G=25Ω, Starting T_J=25°C.

2. Pulse Test : Pulse width≤300µs, duty cycle ≤2%.

3. These parameters have no way to verify.