

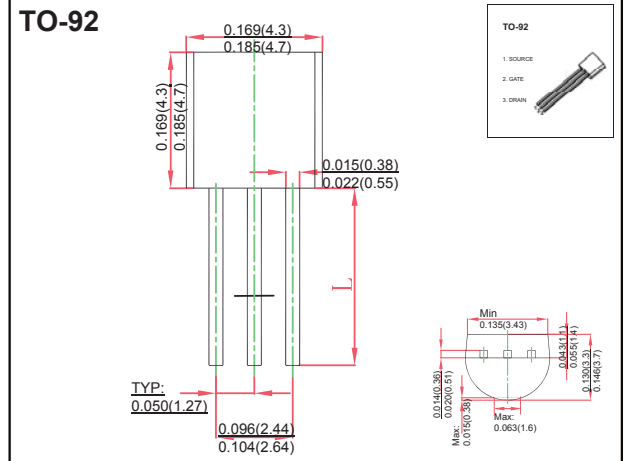
TO-92 Plastic-Encapsulate MOSFETS

FEATURES

- N-Channel Power MOSFET
- Robust High Voltage Termination
- Avalanche Energy Specified
- Source-to-Drain Diode Recovery Time Comparable to a Discrete
- Fast Recovery Diode Diode is Characterized for Use in Bridge Circuits
- I_{DSS} and $V_{DS(on)}$ Specified at Elevated Temperature

MECHANICAL DATA

- Case style:TO-92 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	1	A
Pulsed Drain Current	I _{DM}	9	
Power Dissipation	P _D	0.625	W
Single Pulsed Avalanche Energy*	E _{AS}	20	mJ
Thermal Resistance from Junction to Ambient	R _{thJA}	200	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-50 ~+150	

*E_{AS} condition: T_J=25°C, V_{DD}=100V, V_{GS}=10V, L=10mH, I_{AS}=2A, R_G=25Ω

MOSFET ELECTRICAL CHARACTERISTICS T_A=25°C unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Units	
Drain-Source Breakdown Voltage	V(BR) DSS	V _{GS} = 0V, I _D =250μA	600			V	
Gate-Threshold Voltage (note1)	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	2.0		4.0		
Gate-Body Leakage Current (note1)	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =600V, V _{GS} =0V			0.10	μA	
Drain-Source On-State Resistance (note1)	R _{DS(on)}	V _{GS} =10V, I _D =0.6A			10	Ω	
Forward Transconductance (note1)	g _{FS}	V _{DS} =50V, I _D =0.5A	0.5			S	
Input Capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f =1MHz		210		pF	
Output Capacitance	C _{oss}				28		
Reverse Transfer Capacitance	C _{rss}				4.2		
Turn-On Delay Time	t _{d(on)}	V _{DD} =300V, I _D =1A, V _{GS} =10V, R _G =18Ω		8		nS	
Rise Time	t _r			21			
Turn-Off Delay Time	t _{d(off)}			18			
Fall Time	t _f			24			
Forward on Voltage(note1)	V _{SD}	V _{GS} =0V, I _S =1A			1.5	V	

Notes:

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

RATINGS AND CHARACTERISTIC CURVES

■ Typical Characteristics

