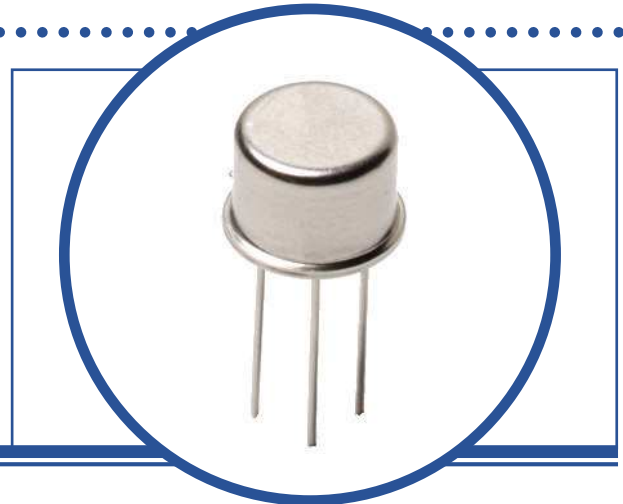


N-CHANNEL LOGIC LEVEL POWER MOSFET

2N6901

- N-Channel Logic Level
- Logic Level Power MOSFET Transistor
In A Hermetic TO-39 Metal Package
- Screening Options Available



ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise stated)

V _{DS}	Drain – Source Voltage		100V
V _{GS}	Gate – Source Voltage		±10V
V _{DG}	Drain – Gate Voltage		100V
I _D	Continuous Drain Current	$T_C = 25^\circ\text{C}$	1.69A
I _D	Continuous Drain Current	$T_C = 100^\circ\text{C}$	1.07A
I _{DM}	Pulsed Drain Current ⁽¹⁾		5A
I _S	Continuous Source Current		1.69A
P _D	Total Power Dissipation at	$T_C = 25^\circ\text{C}$	8.33W
		Derate Above 25°C	0.067W/°C
	Total Power Dissipation at	$T_A = 25^\circ\text{C}$	0.6W
T _J	Junction Temperature Range		-55 to +150°C
T _{stg}	Storage Temperature Range		-55 to +150°C

THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
R _{θJC}	Thermal Resistance, Junction To Case	15	°C/W

Notes

- (1) Repetitive Rating: Pulse width limited by maximum junction temperature
 (2) Pulse Width ≤ 300us, δ ≤ 2%

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ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0 I _D = 1.0mA	100			V
R _{DS(on)} ⁽²⁾	Static Drain-Source On-State Resistance	V _{GS} = 5V I _D = 1.07A T _J = 125°C			1.4 2.6	Ω
V _{GS(th)}	Gate Threshold Voltage	V _{DS} ≥ V _{GS} I _D = 1.0mA T _J = 125°C T _J = -55°C	1.0 0.5		2 3	V
V _{DS(on)}	Drain-Source On-State Voltage	V _{GS} = 5V I _D = 1.69A			2.4	
g _{FS} ⁽²⁾	Forward Transconductance	V _{DS} = 5V I _{DS} = 1.07A	0.5		2.0	S(Ω)
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} = 0 V _{DS} = 80V T _J = 125°C			1.0 50	μA
I _{GSSF}	Forward Gate-Source Leakage	V _{GS} = +10V V _{DS} = 0 T _J = 125°C			100 200	nA
I _{GSSR}	Reverse Gate-Source Leakage	V _{GS} = -10V V _{DS} = 0 T _J = 125°C			-100 -200	nA

DYNAMIC CHARACTERISTICS

t _{d(on)}	Turn-On Delay Time	V _{GS} = 5V			25	ns
T _r	Rise Time	R _G = 25Ω			80	
t _{d(off)}	Turn-Off Delay Time	V _{DD} = 50V			45	
T _f	Fall Time	I _D = 1.07			80	

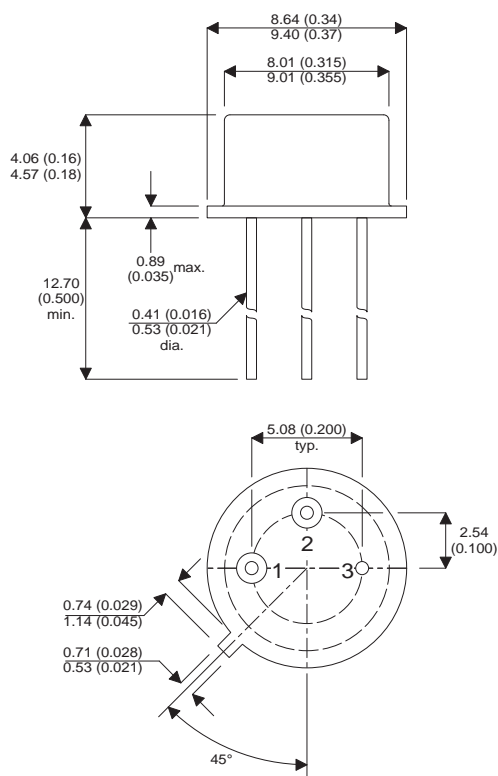
SOURCE-DRAIN DIODE CHARACTERISTICS

I _S	Continuous Source Current				1.69	A
t _{rr}	Reverse Recovery Time	V _{DD} ≤ 30V I _F = 1.0A			250	ns
V _{SD} ⁽²⁾	Diode Forward Voltage	I _S = 1.69A V _{GS} = 0	0.8		1.6	V

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MECHANICAL DATA

Dimensions in mm (inches)



TO39 – Low Profile (TO-205AF)

Pin 1 - Source

Pin 2 - Gate

Case - Drain