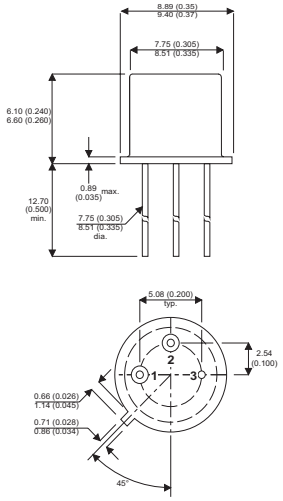
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MECHANICAL DATA
Dimensions in mm (inches)



TO–39 METAL PACKAGE

Underside View

PIN 1 – Source PIN 2 – Gate PIN 3 – Drain Case

TMOS FET TRANSISTOR
N – CHANNEL

FEATURES

- **V_{DSS} = 100V**
- **I_D = 8A**
- **R_{DSON} = 0.18Ω**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{DSS}	Drain–Source Voltage	100V
V_{DGR}	Drain–Gate Voltage (R_{GS} = 1.0mΩ)	100V
V_{GS}	Gate–Source Voltage	±20V
I_D	Drain Current Continuous	8.0A
I_{DM}	Drain Current Pulsed	32A
P_D	Total Device Dissipation @ T_C = 25°C	25W
	Derate above 25°C	0.2W/ °CW
T_J , T_{STG}	Operating and Storage Junction Temperature Range	–55 to +150°C
THERMAL CHARACTERISTICS		
$R_{\theta JC}$	Thermal Resistance Junction to Case	5.0°CW
$R_{\theta JC}$	Thermal Resistance Junction to Ambient	175°CW
T_L	Maximum Lead Temperature 1.5mm from Case for 10 s	300°C

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

	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
	OFF CHARACTERISTICS					
$V_{(BR)DSS}$	Drain–Source Breakdown Voltage	V_{GS} = 0 I_D = 0.25mA	100			V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=Rated V_{DSS} V_{GS} = 0			250	µA
		V_{DS} = 80V V_{GS} = 0			1000	
		T_J = 125°C				
I_{GSSF}	Gate–Body Leakage Current,Forward	V_{DS} = 0 V_{GS} = 20V			100	nA
I_{GSSR}	Gate–Body Leakage Current,Reverse	V_{DS} = 0 V_{GS} = –20V			–100	
	ON CHARACTERISTICS					
$V_{GS(th)}$	Gate Thresshold Voltage	V_{DS} = V_{GS} I_D = 0.5mA	2.0		4.0	V
$r_{DS(on)}$	Static Drain–Source On–Resistance	V_{GS} = 10V I_D = 5.0A			0.18	Ω
		T_A = 125°C			0.35	
$V_{DS(on)}$	Drain–Source On–Voltage	V_{GS} = 10V I_D = 8.0A			1.56	V
gf_S	Forward Transconductance	V_{GS} = 15V I_D = 5.0A	3.0		9.0.	mhos
	DYNAMIC CHARACTERISTICS					
C_{iss}	Input Capacitance	V_{DS} = 25V V_{GS} = 0 f = 1.0MH$_Z$	350		900	pF
C_{oss}	Output capacitance		150		500	
C_{rss}	Reverse Transfer Capacitance		50		150	
	SWITCHING CHARACTERISTICS					
t_{on}	Turn–On Time	V_{DD} = 30V I_D = 5.0A R_{gen} = 50 ohms			30	ns
t_{off}	Turn–Off Time				75	
t_r	RiseTime				40	
t_f	FallTime				45	
	SOURCE DRAIN DIODE CHARACTERISTICS*					
V_{SD}	Diode Forward Voltage	I_S = Rated $I_{D(on)}$ V_{GS} = 0	0.75		1.5	V
t_{on}	Forward turn-On Time				Negligible	ns
t_{rr}	Reverse Recovery Time				300	

1) Pulse test : Pulse Width < 300µs ,Duty Cycle < 2%