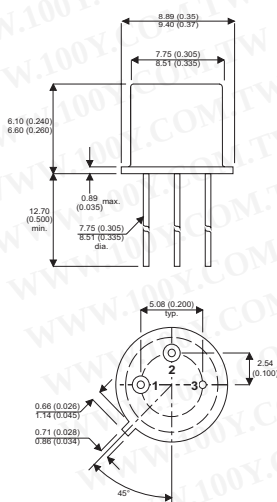


MECHANICAL DATA

Dimensions in mm (inches)



N-CHANNEL ENHANCEMENT MODE TRANSISTOR

FEATURES

- $V_{(BR)DSS} = 200V$
- $I_D = 5.5A$
- $R_{DS(on)} = 0.40\Omega$

TO-39 METAL PACKAGE

Underside View

PIN 1 – Source

PIN 2 – Gate

PIN 3 – Drain

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

V_{DS}	Drain–Source Voltage	200V
V_{GS}	Gate–Source Voltage	$\pm 20V$
I_D	Drain Current Continuous $T_C = 25^\circ C$	5.5A
	$T_C = 100^\circ C$	3.5A
I_{DM}	Drain Current Pulsed	22A
I_A	Avalanche Current	3.1A
P_D	Total Device Dissipation @ $T_C = 25^\circ C$	25W
	$T_C = 100^\circ C$	10W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to $+150^\circ C$
THERMAL CHARACTERISTICS		
$R_{\theta JC}$	Thermal Resistance Junction to Case	$5.0^\circ C/W$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	$175^\circ C/W$
T_L	Maximum Lead Temperature 1.5mm from Case for 10 secs.	$300^\circ C$

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
V _{(BR)DSS}	Drain–Source Breakdown Voltage	V _{GS} = 0	I _D = 1000μA	200			V
V _{GS(th)}	Gate Threshhold Voltage	V _{DS} =V _{GS}	I _D = 250μA	2.0		4.0	
I _{GSS}	Gate–Body Leakage	V _{DS} = 0	V _{GS} = ±20V			100	nA
I _{D(on)}	On-State Drain Current ¹	V _{DS} = 2.2	V _{GS} = 10V	5.5			A
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =0.8 x V _{(BR)DSS}				25	μA
		V _{GS} = 0	T _j = 125°C			250	
r _{DS(on)}	Drain–Source On–Resistance ¹	V _{GS} = 10V	I _D = 3.5A		0.25	4.0	Ω
g _{fS}	Forward Transconductance ¹	V _{DS} = 5V	I _D = 3.5A	2.5	3.0		s(Ω)
C _{iss}	Input Capacitance	V _{DS} = 25V V _{GS} = 0 f = 1.0MHz _Z			600		pF
C _{oss}	Output capacitance				250		
C _{rss}	Reverse Transfer Capacitance				80		
t _{don}	Turn–On Delay Time	V _{DD} = 77V	RL = 22Ω		8	30	ns
t _r	RiseTime	I _D = 3.5A	V _{GEN} = 10V		42	50	
t _{d(of)}	Turn off Delay Time	R _G = 7.5 ohms			12	50	
t _f	FallTime				30	40	
SOURCE DRAIN DIODE RATING CHARACTERISTICS							
V _{SD}	Diode Forward Voltage ¹	I _F = I _S	V _{GS} = 0			1.4	V
I _S	Continues Current					5.5	A
I _{SM}	Pulsed Current ²					22	
t _{rr}	Reverse Recovery Time	I _F = I _S			150	500	ns
Q _{rr}	Reverse Recovered Charge	dI _F /DT = 100A/μS				6	μC

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

2) Pulse width limited by maximum junction temperature