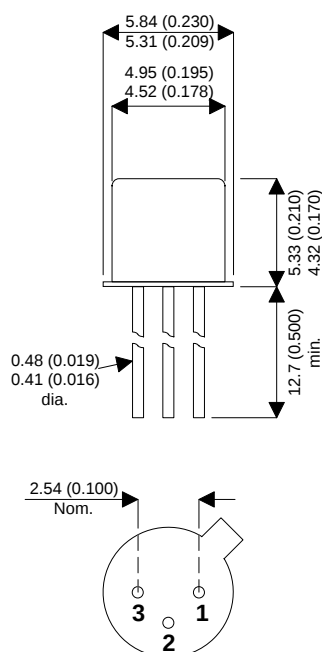


MECHANICAL DATA

Dimensions in mm (inches)



TO-18 METAL PACKAGE

Underside View

PIN 1 – Source PIN 2 – Drain PIN 3 – Gate
(Gate is connected to case)

JFET SWITCHING N CHANNEL- DEPLETION

FEATURES

- LOW ON RESISTANCE
- FAST SWITCHING
- MILITARY OPTIONS AVAILABLE

APPLICATIONS:

- SWITCHING APPLICATIONS

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

V_{DS}	Drain–Source Voltage	40V
V_{DG}	Drain–Gate Voltage	40V
V_{GS}	Gate–Source Voltage	40V
I_{GF}	Forward Gate Current	50mA
P_D	Total Device Dissipation @ $T_C = 25^{\circ}C$	1.8W
	Derate above $25^{\circ}C$	10mW/ $^{\circ}C$
T_J	Operating Junction Temperature Range	-65 to $+175^{\circ}C$
T_{STG}	Storage Temperature Range	-65 to $+175^{\circ}C$

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS							
V _{(BR)GSS}	Gate Source Breakdown Voltage ¹	I _G = 1.0μA	V _{DS} = 0	40			V
I _{GSS}	Gate Reverse Current	V _{GS} = 20V	V _{DS} = 0			0.1	nA
		V _{GS} = 20V	V _{DS} = 0 T _A = 150°C			0.2	μA
V _{GS}	Gate Source Voltage	V _{DS} = 20V	I _D = 1.0nA	-0.2		-5	V
V _{GS(f)}	Gate Source Forward Voltage	I _G = 1.0mA	V _{DS} = 0			1.0	V
I _{D(off)}	Drain Cut-off Current	V _{GS} = 7V	V _{DS} = 20V			0.1	nA
		V _{GS} = 7V	V _{DS} = 20V T _A = 150°C			0.2	μA
ON CHARACTERISTICS							
I _{DSS}	Zero Gate voltage Drain Current ¹	V _{GS} = 0V	V _{DS} = 20V	25		75	mA
V _{DS(on)}	Drain Source On-Voltage	I _D = 6mA	V _{GS} = 0			0.4	V
r _{DS(on)}	Static Drain Source On Resistance	I _D = 1.0mA	V _{GS} = 0			60	Ω
ELECTRICAL CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{GS} = 0V	V _{DS} = 20V f = 1.0MHz			14	pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} = 7V	V _{DS} = 0V f = 1.0MHz			3.5	
SMALL SIGNAL CHARACTERISTICS							
r _{ds(on)}	Drain–Source “ON” Resistance	V _{GS} = 0V	I _D = 0 f = 1.0kHz			60	Ω
SWITCHING CHARACTERISTICS							
t _{on}	Turn–On Time	I _{D(on)} = 6mA				15	ns
t _{off}	Turn–Off Time	V _{GS(on)} = 7V				35	
t _r	RiseTime	I _{D(on)} = 6mA				5.0	
t _f	FallTime	V _{GS(off)} = 7V				20	

- 1) Pulse test : Pulse Width < 100 μs ,Duty Cycle < 2%
- 2) f_t is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.