Philips Components

Data sheet	
status	Preliminary specification
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2N3819
N-channel J-FET

FEATURES

- Low cost
- Specified at 100 MHz
- Automatic insertion package.

DESCRIPTION

N-channel junction field-effect transistor in a plastic TO-92 envelope. It is intended for use in general purpose amplifiers and for analog switching.

PINNING - TO-92

PIN	DESCRIPTION
1	drain
2	gate
3	source

PIN CONFIGURATION

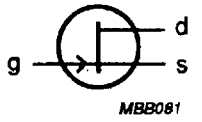

Fig.1 Symbol.

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LIMITING VALUES

In accordance with the Absolute Maximum System (IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$\pm V_{DS}$	drain-source voltage		-	25	V
$-V_{GSO}$	gate-source voltage	open drain $I_D = 0$	-	25	V
V_{DGO}	drain-gate voltage	open source $I_S = 0$	-	25	V
I_G	gate current		-	10	mA
P_{tot}	total power dissipation	$T_{amb} = 25$ °C	-	360	mW
T_{stg}	storage temperature range		−65	150	°C
T_j	junction temperature		-	150	°C

THERMAL RESISTANCE

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}a}$	from junction to ambient	347	K/W

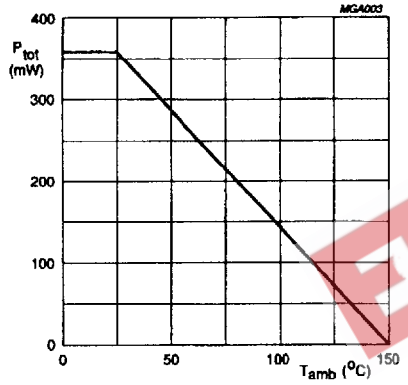

Fig.2 Total power dissipation as a function of ambient temperature.

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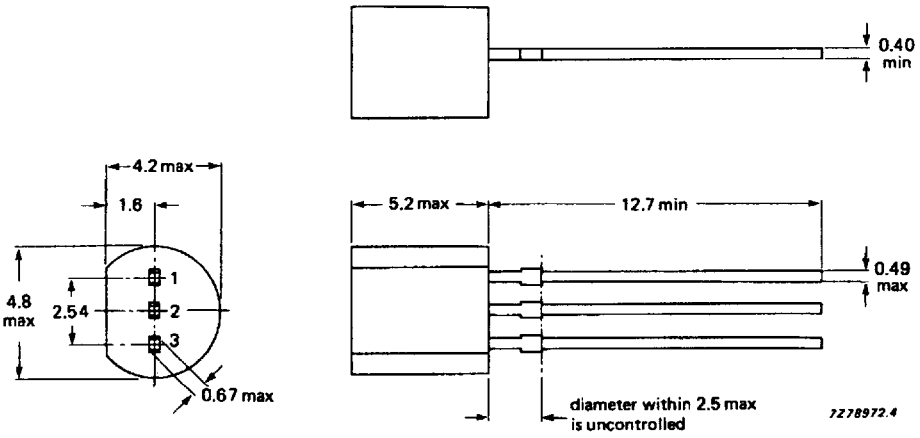
CHARACTERISTICS

T_{amb} = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$-V_{(BR)GSS}$	gate-source breakdown voltage	V_{DS} = 0 $-I_G$ = 1 µA	25	-	V
$-I_{GSS}$	gate-source leakage current	$-V_{GS}$ = 15 V V_{DS} = 0	-	2	nA
		$-V_{GS}$ = 15 V V_{DS} = 0 T_{amb} = 100 °C	-	2	µA
I_{DSS}	drain-source current	V_{GS} = 0 V_{DS} = 15 V	2	20	mA
$-V_{GS}$	gate-source voltage	I_D = 200 µA V_{DS} = 15 V	0.5	7.5	V
$-V_{(P)GS}$	gate-source cut-off voltage	I_D = 2 nA V_{DS} = 15 V	-	8	V
$\|y_{fs}\|$	transfer admittance	V_{DS} = 15 V V_{GS} = 0 f = 1 kHz	2	6.5	mS
$\|y_{fs}\|$	transfer admittance	V_{DS} = 15 V V_{GS} = 0 f = 100 MHz	1.6	-	mS
$\|y_{os}\|$	output admittance	V_{DS} = 15 V V_{GS} = 0 f = 1 kHz	-	50	µS
C_{iss}	input capacitance	V_{DS} = 15 V V_{GS} = 0 f = 1 MHz	-	8	pF
C_{rss}	feedback capacitance	V_{DS} = 15 V V_{GS} = 0 f = 1 MHz	-	4	pF

PACKAGE OUTLINE



Dimensions in mm

Fig.3 TO-92.