Philips Semiconductors

Data sheet	
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2N5460/5461/5462
P-channel J-FETs

DESCRIPTION

P-channel silicon junction field-effect transistor in a TO-92 plastic envelope. It is intended for use as an analog switch and an amplifier.

PINNING - TO-92

PIN	DESCRIPTION
1	gate
2	drain
3	source

PIN CONFIGURATION

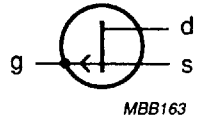

Fig.1 Symbol.

LIMITING VALUES

In accordance with the Absolute Maximum System (IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$\pm V_{DS}$	drain-source voltage		-	40	V
V_{GS}	gate-source voltage		-	40	V
$-I_G$	gate current		-	10	mA
P_{tot}	total power dissipation	$T_{amb} \leq 40$ °C	-	310	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	355	K/W

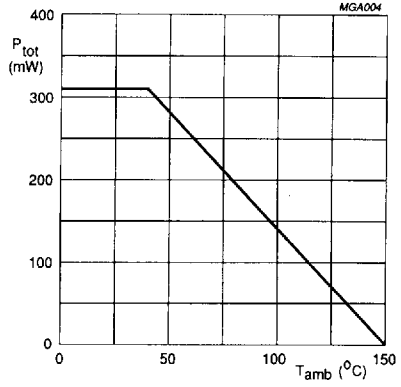

Fig.2 Total power dissipation as a function of ambient temperature.

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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS		MIN.	MAX.	UNIT
I_{GSS}	gate-source leakage current	V_{GS} = 20 V V_{DS} = 0		-	5	nA
		V_{GS} = 20 V V_{DS} = 0 T_{amb} = 100 °C		-	1	µA
$-I_{DSS}$	drain-source leakage current	$-V_{DS}$ = 15 V V_{GS} = 0	2N5460 2N5461 2N5462	1 2 4	5 9 16	mA mA mA
V_{GS}	gate-source voltage	$-I_D$ = 0.1 mA $-V_{DS}$ = 15 V	2N5460	0.5	4	V
V_{GS}	gate-source voltage	$-I_D$ = 0.2 mA $-V_{DS}$ = 15 V	2N5461	0.8	4.5	V
V_{GS}	gate-source voltage	$-I_D$ = 0.4 mA $-V_{DS}$ = 15 V	2N5462	1.5	6	V
$V_{P(GS)}$	gate-source cut-off voltage	$-I_D$ = 1 µA $-V_{DS}$ = 15 V	2N5460 2N5461 2N5462	0.75 1 1.8	6 7.5 9	V V V
$\|y_{fs}\|$	transfer admittance	$-V_{DS}$ = 15 V V_{GS} = 0 f = 1 kHz	2N5460 2N5461 2N5462	1 1.5 2	4 5 6	mS mS mS
$\|y_{os}\|$	output admittance	$-V_{DS}$ = 15 V V_{GS} = 0 f = 1 kHz		-	75	µS
C_{iss}	input capacitance	$-V_{DS}$ = 15 V V_{GS} = 0 f = 1 MHz		-	7	pF
C_{rss}	feedback capacitance	$-V_{DS}$ = 15 V V_{GS} = 0 f = 1 MHz		-	2	pF
NF	noise figure	$-V_{DS}$ = 15 V V_{GS} = 0 f = 100 Hz B = 1 Hz		-	2.5	dB