

2N2609

GENERAL DESCRIPTION - The 2N2609 is a silicon Planar* P-channel field-effect transistor designed primarily for low power audio-frequency applications in industrial service.

ABSOLUTE MAXIMUM RATINGS (Note 1)

Maximum Temperatures

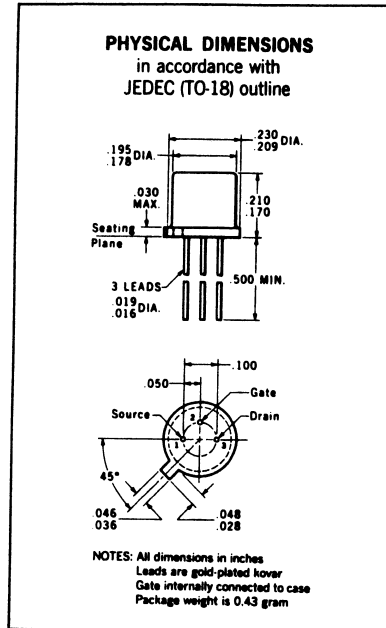
Operating Junction Temperature	175°C
Storage Temperature	-65°C to +200°C
Soldering Temperature (10 seconds time limit)	260°C

Maximum Power Dissipation

Total Dissipation at 25°C Ambient Temperature (Note 2)	0.3 Watt
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Maximum Voltages

V_{SG} Source to Gate Voltage	-30 Volts
V_{DS} Drain to Source Voltage	-30 Volts
V_{DG} Drain to Gate Voltage	-30 Volts



ELECTRICAL CHARACTERISTICS (25°C Free Air Temperature unless otherwise noted)

Symbol	Characteristic	Min.	Max.	Units	Test Conditions
BV_{GSS}	Gate to Source Breakdown Voltage	30		Volts	$I_G = 1.0 \mu A$ $V_{DS} = 0$
I_{DSS}	Drain Current	2.0	10	mA	$V_{DS} = -5.0 V$ $V_{GS} = 0$
I_{GSS}	Gate Reverse Current		30	nA	$V_{DS} = 0$ $V_{GS} = 5.0 V$
$V_P (V_{GS} \text{ off})$	Gate to Source Pinch-off Voltage	1.0	4.0	Volts	$V_{DS} = -5.0 V$ $I_D = 1.0 \mu A$
Y_{fs}	Forward Transadmittance ($f = 1.0 \text{ kHz}$)	2500		μmhos	$V_{DS} = -5.0 V$ $V_{GS} = 0$
C_{iss}	Input Capacitance ($f = 140 \text{ kHz}$)		30	pF	$V_{DS} = -5.0 V$ $V_{GS} = 1.0 V$
$I_{GSS} (150^\circ C)$	Gate Reverse Current		30	μA	$V_{DS} = 0$ $V_{GS} = 5.0 V$
NF	Spot Noise Figure ($f = 1.0 \text{ kHz}$)		3.0	dB	$V_{DS} = -5.0 V$ $V_{GS} = 0$
					$R_S = 1.0 M\Omega$ $BW = 160 \text{ Hz}$

*Planar is a patented Fairchild process.

NOTES:

- (1) These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
- (2) This rating gives a maximum junction temperature of 175°C and junction to ambient thermal resistance of 500°C/Watt (derating factor of 2.0 mW/°C).

