2N4859
2N4859A

N-CHANNEL
SILICON JFET



TO-18 CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4859 and 2N4859A are N-Channel silicon JFETs designed for analog switching and chopper applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	30	V
Drain-Gate Voltage	V_{DG}	30	V
Reverse Gate-Source Voltage	V_{GSR}	30	V
Forward Gate Current	I_{GF}	50	mA
Power Dissipation (T_A=25°C)	P_D	360	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

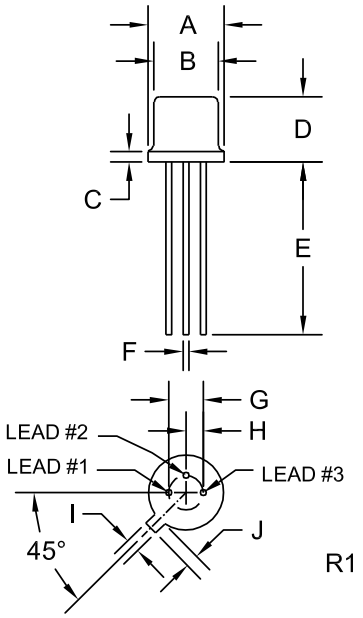
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{GSS}	V_{GS}=15V, V_{DS}=0		0.25	nA
I_{GSS}	V_{GS}=15V, V_{DS}=0, T_A=150°C		0.5	µA
I_{DSS}	V_{DS}=15V, V_{GS}=0	50		mA
$I_{D(OFF)}$	V_{DS}=15V, V_{GS}=10V		0.25	nA
$I_{D(OFF)}$	V_{DS}=15V, V_{GS}=10V, T_A=150°C		0.5	µA
BV_{GSS}	I_G=1.0µA, V_{DS}=0	30		V
$V_{GS(OFF)}$	V_{DS}=15V, I_D=0.5nA	4.0	10	V
$V_{DS(ON)}$	I_D=20mA, V_{GS}=0		0.75	V
$r_{DS(ON)}$	V_{GS}=0, I_D=0, f=1.0kHz		25	Ω
C_{rss}	V_{GS}=10V, V_{DS}=0, f=1.0MHz (2N4859)		8.0	pF
C_{rss}	V_{GS}=10V, V_{DS}=0, f=1.0MHz (2N4859A)		4.0	pF
C_{iss}	V_{GS}=10V, V_{DS}=0, f=1.0MHz (2N4859)		18	pF
C_{iss}	V_{GS}=10V, V_{DS}=0, f=1.0MHz (2N4859A)		10	pF
t_d	V_{DD}=10V, $V_{GS(OFF)}$=10V, I_D=20mA (2N4859)		6.0	ns
t_d	V_{DD}=10V, $V_{GS(OFF)}$=10V, I_D=20mA (2N4859A)		5.0	ns
t_r	V_{DD}=10V, $V_{GS(OFF)}$=10V, I_D=20mA		3.0	ns
t_{off}	V_{DD}=10V, $V_{GS(OFF)}$=10V, I_D=20mA (2N4859)		25	ns
t_{off}	V_{DD}=10V, $V_{GS(OFF)}$=10V, I_D=20mA (2N4859A)		20	ns

R0 (11-June 2012)

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TO-18 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Source
2) Drain
3) Gate

MARKING: FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (REV: R1)

R0 (11-June 2012)