2N3859A

SILICON
NPN TRANSISTOR

TO-92 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3859A is a silicon NPN transistor designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	100	mA
Power Dissipation	P_D	625	mW
Power Dissipation (T_C=25°C)	P_D	1.5	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	200	°C/W
Thermal Resistance	Θ_{JC}	83.3	°C/W

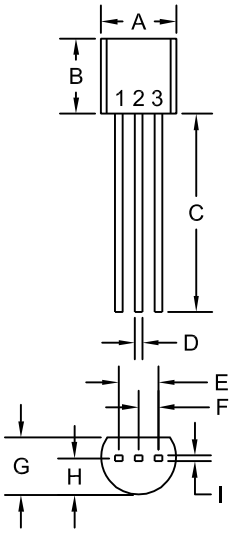
ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	V_{CB}=60V		50	nA
I_{EBO}	V_{EB}=6.0V		100	nA
BV_{CBO}	I_C=100μA	60		V
BV_{CEO}	I_C=1.0mA	60		V
BV_{EBO}	I_E=100μA	6.0		V
$V_{CE(SAT)}$	I_C=10mA, I_B=1.0mA		125	mV
$V_{BE(SAT)}$	I_C=10mA, I_B=1.0mA		780	mV
h_{FE}	V_{CE}=4.5V, I_C=2.0mA	100	200	
h_{FE}	V_{CE}=1.0V, I_C=10mA	100		
f_T	V_{CE}=10V, I_C=2.0mA	90	250	MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		4.0	pF
$r_b'C_c$	V_{CE}=10V, I_C=2.0mA		150	ps

2N3859A

SILICON
NPN TRANSISTOR

TO-92 CASE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:
1) Emitter
2) Collector
3) Base

MARKING:
FULL PART NUMBER

2N3859A

SILICON
NPN TRANSISTOR

SERVICES

- Bonded Inventory
- Custom Electrical Screening
- Custom Electrical Characteristic Curves
- SPICE Models
- Custom Packaging
- Package Base Options
- Custom Device Development / Multi Discrete Modules (MDM™)

R0 (8-December 2014)