2N5058
2N5059

SILICON
NPN TRANSISTORS

TO-39 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N5058 and 2N5059 are silicon NPN epitaxial planar transistors designed for high voltage general purpose amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**	**2N5058**	**2N5059**	**UNITS**
Collector-Base Voltage	V_{CBO}	300	250	V
Collector-Emitter Voltage	V_{CEO}	300	250	V
Emitter-Base Voltage	V_{EBO}	7.0	6.0	V
Continuous Collector Current	I_C	150		mA
Power Dissipation	P_D	1.0		W
Power Dissipation (T_C=25°C)	P_D	5.0		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		°C
Thermal Resistance	Θ_{JA}	150		°C/W
Thermal Resistance	Θ_{JC}	30		°C/W

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

		2N5058		**2N5059**		
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=100V	-	50	-	50	nA
I_{CBO}	V_{CB}=100V, T_A=125°C	-	20	-	20	µA
I_{EBO}	V_{EB}=5.0V	-	10	-	10	nA
BV_{CBO}	I_C=100µA	300	-	250	-	V
BV_{CEO}	I_C=30mA	300	-	250	-	V
BV_{EBO}	I_E=100µA	7.0	-	6.0	-	V
$V_{CE(SAT)}$	I_C=30mA, I_B=3.0mA	-	1.0	-	1.0	V
$V_{BE(SAT)}$	I_C=30mA, I_B=3.0mA	-	0.85	-	0.85	V
$V_{BE(ON)}$	V_{CE}=25V, I_C=30mA	-	0.82	-	0.82	V
h_{FE}	V_{CE}=25V, I_C=5.0mA	10	-	-	10	
h_{FE}	V_{CE}=25V, I_C=30mA	35	150	30	150	
h_{FE}	V_{CE}=25V, I_C=30mA, T_A=-55°C	10	-	-	-	
h_{FE}	V_{CE}=25V, I_C=100mA	35	-	30	-	
f_T	V_{CE}=25V, I_C=10mA, f=20MHz	30	160	30	160	MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz	-	10	-	10	pF
C_{ib}	V_{EB}=0.5V, I_C=0, f=1.0MHz	-	75	-	75	pF

R1 (27-March 2015)

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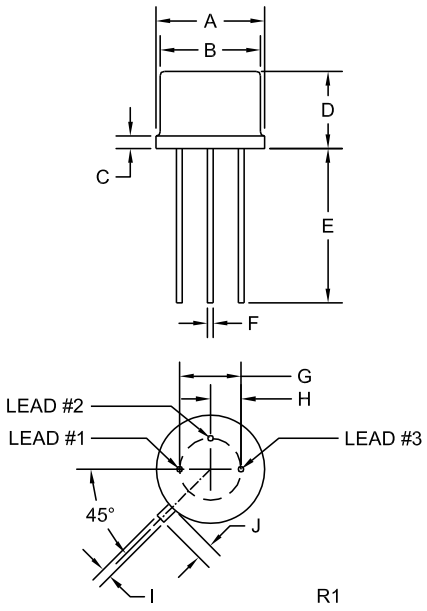
TO-39 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

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

MARKING: FULL PART NUMBER

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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