



Micro Commercial Components  
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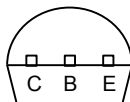
# 2SC1959

## Power Silicon NPN Transistor

### Features

- Audio frequency low power amplifier applications, driver stage amplifier applications, switching applications
- Excellent  $h_{FE}$  Linearity:  $h_{FE(2)} = 25(\text{Min.})$ ;  $V_{CE} = 6.0V$ ,  $I_C = 400mA$
- 1 Watt Amplifier applications
- Complementary to 2SA562TM.

Pin Configuration  
Bottom View



### Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	30	V
$V_{CBO}$	Collector-Base Breakdown Voltage	35	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector Current	500	mA
$I_B$	Base Current	100	mA
$P_C$	Collector Power Dissipation	500	mW
$T_J$	Operating Junction Temperature	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 to +150	$^{\circ}C$

### Electrical Characteristics @ 25 $^{\circ}C$ Unless Otherwise Specified

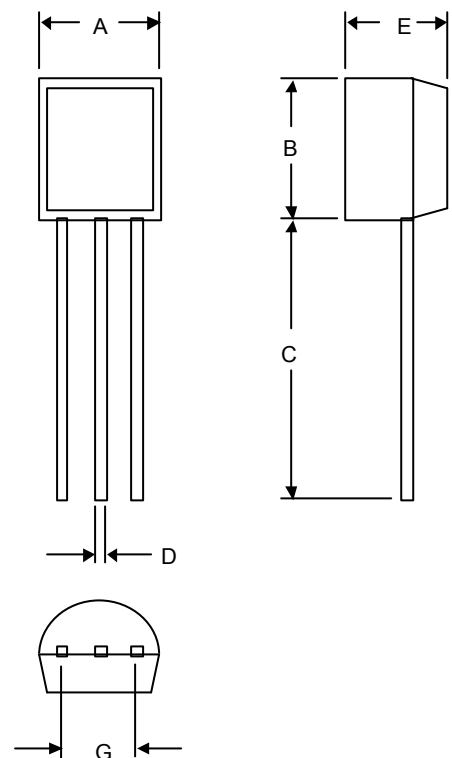
Symbol	Parameter	Min	Typ	Max	Units
OFF CHARACTERISTICS					
$I_{CBO}$	Collector-Base Cutoff Current ( $V_{CB} = 35V_{dc}$ , $I_E = 0$ )	---	---	0.1	$\mu A_{dc}$
$I_{EBO}$	Emitter-Base Cutoff Current ( $V_{EB} = 5.0V_{dc}$ , $I_C = 0$ )	---	---	0.1	$\mu A_{dc}$

### ON CHARACTERISTICS

$h_{FE-1}$	DC Current Gain* ( $I_C = 100mA_{dc}$ , $V_{CE} = 1.0V_{dc}$ )	70	---	400	---
$h_{FE-2}$	DC Current Gain* ( $I_C = 400mA_{dc}$ , $V_{CE} = 6.0V_{dc}$ )	25	---	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C = 100mA_{dc}$ , $I_B = 10mA_{dc}$ )	---	0.1	0.25	Vdc
$V_{BE}$	Base-Emitter Voltage ( $I_C = 100mA_{dc}$ , $V_{CE} = 1.0V_{dc}$ )	---	0.8	1.0	Vdc
$f_T$	Transition Frequency ( $V_{CE} = 6.0V_{dc}$ , $I_C = 20mA_{dc}$ )	200	300	---	MHz
$C_{OBO}$	Collector Output Capacitance ( $V_{CB} = 6.0V_{dc}$ , $I_C = 0$ , $f = 1.0MHz$ )	---	7.0	---	pF

Note:  $h_{FE(1)}$  Classification O: 70-140, Y: 120-240, GR: 200-400  
 $h_{FE(1)}$  Classification O: 25 (Min.), Y: 40 (Min.)

### TO-92



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

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