

**2SC1815**  
**2SC1815-O**  
**2SC1815-Y**  
**2SC1815-GR**  
**2SC1815-BL**

**SILICON NPN TRANSISTORS**



**TO-92 CASE**



[www.centralsemi.com](http://www.centralsemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2SC1815 Series are silicon NPN transistors, manufactured by the epitaxial planar process, designed for general purpose amplifier applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	150	mA
Power Dissipation	$P_D$	400	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-55 to +125	$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	250	$^\circ\text{C}/\text{W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

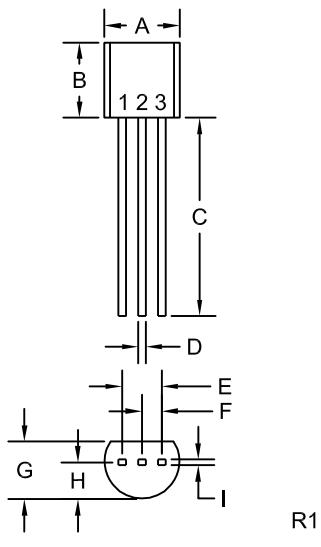
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=60\text{V}$		100	nA
$I_{CEO}$	$V_{CE}=50\text{V}$		100	nA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	60		V
$BV_{CEO}$	$I_C=100\mu\text{A}$	50		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	5.0		V
$V_{CE(\text{SAT})}$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.25	V
$V_{BE(\text{SAT})}$	$I_C=100\text{mA}, I_B=10\text{mA}$		1.0	V
$V_{BE}$	$I_E=310\text{mA}$		1.45	V
$h_{FE}$	$V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815)	70	700	
$h_{FE}$	$V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-O)	70	140	
$h_{FE}$	$V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-Y)	120	240	
$h_{FE}$	$V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-GR)	200	400	
$h_{FE}$	$V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-BL)	350	700	
$f_T$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=30\text{MHz}$	80		MHz

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TO-92 CASE - MECHANICAL OUTLINE



R1

SYMBOL	INCHES		MILLIMETERS	
	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

R1 (10-May 2018)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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