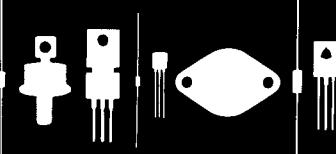


CENTRAL  
 SEMICONDUCTOR CORP.  
 CENTRAL  
 SEMICONDUCTOR CORP.  
 CENTRAL  
 Semiconductor Corp.  
**Central™**  
**Semiconductor Corp.**  
 145 Adams Avenue  
 Hauppauge, New York 11788



GES6014  
GES6016

NPN SILICON TRANSISTOR

JEDEC TO-92 CASE

### DESCRIPTION

The CENTRAL SEMICONDUCTOR GES6014, GES6016 types are Silicon NPN Transistors manufactured by the epitaxial planar process designed for general purpose medium power amplifier and switching applications. The PNP complementary types are GES6015, GES6017 respectively.

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

	<u>SYMBOL</u>	<u>GES6014</u>	<u>GES6016</u>	<u>UNIT</u>
Collector-Base Voltage	$V_{CBO}$	70	70	V
Collector-Emitter Voltage	$V_{CES}$	70	70	V
Collector-Emitter Voltage	$V_{CEO}$	60	60	V
Emitter-Base Voltage	$V_{EBO}$	5.0	5.0	V
Collector Current	$I_C$	800	800	mA
Collector Current (PEAK)	$I_{CM}$	1500	1500	mA
Power Dissipation	$P_D$	625	625	mW
Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_D$	1.0	1.0	W
Operating and Storage Junction Temp.	$T_J, T_{stg}$	-65 T0 +150		°C

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>GES6014</u>		<u>GES6016</u>		<u>UNIT</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
$I_{CBO}$	$V_{CB}=25\text{V}$			10	10	nA
$I_{EBO}$	$V_{EB}=3.0\text{V}$			20	20	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	70		70		V
$BV_{CES}$	$I_C=100\mu\text{A}$	70		70		V
$BV_{CEO}$	$I_C=10\text{mA}$	60		60		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	5.0		5.0		V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$			0.150	0.150	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.500	0.500	V
$V_{BE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	0.70	0.88	0.70	0.88	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	0.80	1.0	0.80	1.0	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	0.55	0.75	0.55	0.75	V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=100\mu\text{A}$	45		70		
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	100	300	200	500	
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	85		170		
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	20		20		
$h_{fe}$	$V_{CE}=10\text{V}, I_E=1.0\text{mA}, f=1.0\text{kHz}$	65	450	130	750	
$h_{ie}$	$V_{CE}=10\text{V}, I_E=1.0\text{mA}, f=1.0\text{kHz}$	1.5	12	2.5	20	$\mu\Omega$
$hoe$	$V_{CE}=10\text{V}, I_E=1.0\text{mA}, f=1.0\text{kHz}$			45	170	$\mu\text{mos}$
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			10	10	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$			50	45	pF
$f_T$	$V_{CE}=10\text{V}, I_E=10\text{mA}, f=30\text{MHz}$	105	335	135	425	MHz
$NF$	$V_{CE}=5.0\text{V}, I_E=100\mu\text{A}, BW=15.7\text{kHz}, R_s=5.0\text{k}\Omega$ $f=10\text{Hz}$ , to $10\text{kHz}$			5.0	3.0	
$t_{on}$	$V_{CC}=30\text{V}, I_C(\text{ON})=150\text{mA}, I_B1=15\text{mA}, V_{BE}(\text{OFF})=0$		37TYP			ns
$t_{OFF}$	$V_{CC}=30\text{V}, I_C(\text{ON})=150\text{mA}, I_B1=I_B2=15\text{mA}$		400TYP			ns
				400TYP		ns

## 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 (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

### 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

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centralsemi.com](http://www.centralsemi.com)

**Worldwide Field Representatives:**  
[www.centralsemi.com/wwreps](http://www.centralsemi.com/wwreps)

**Worldwide Distributors:**  
[www.centralsemi.com/wwdistributors](http://www.centralsemi.com/wwdistributors)

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centralsemi.com/terms](http://www.centralsemi.com/terms)

# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

***Click to view similar products for Bipolar Transistors - BJT category:***

***Click to view products by Central Semiconductor manufacturer:***

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [MJ15024/WS](#) [MJ15025/WS](#) [BC546/116](#) [BC556/FSC](#) [BC557/116](#) [BSW67A](#) [HN7G01FU-A\(T5L,F,T\)](#)  
[NJVMJD148T4G](#) [NSVMMBT6520LT1G](#) [NTE187A](#) [NTE195A](#) [NTE2302](#) [NTE2330](#) [NTE2353](#) [NTE316](#) [IMX9T110](#) [NTE63](#) [NTE65](#)  
[C4460](#) [SBC846BLT3G](#) [2SA1419T-TD-H](#) [2SA1721-O\(TE85L,F\)](#) [2SA1727TLP](#) [2SA2126-E](#) [2SB1202T-TL-E](#) [2SB1204S-TL-E](#) [2SC5488A-TL-H](#)  
[2SD2150T100R](#) [SP000011176](#) [FMC5AT148](#) [2N2369ADCSM](#) [2SB1202S-TL-E](#) [2SC2412KT146S](#) [2SC4618TLN](#) [2SC5490A-TL-H](#)  
[2SD1816S-TL-E](#) [2SD1816T-TL-E](#) [CMXT2207 TR](#) [CPH6501-TL-E](#) [MCH4021-TL-E](#) [BC557B](#) [TTC012\(Q\)](#) [BULD128DT4](#) [JANTX2N3810](#)  
[Jantx2N5416](#) [US6T6TR](#) [KSF350](#) [068071B](#)