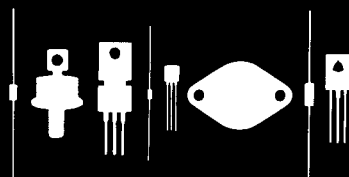


Central
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145 Adams Avenue
Hauppauge, New York 11788



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)

	SYMBOL	GES6014	GES6016	UNIT
Collector-Base Voltage	V_{CB0}	70	70	V
Collector-Emitter Voltage	V_{CES}	70	70	V
Collector-Emitter Voltage	V_{CEO}	60	60	V
Emitter-Base Voltage	V_{EB0}	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 TO +150		$^{\circ}\text{C}$

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

SYMBOL	TEST CONDITIONS	GES6014		GES6016		UNIT
		MIN	MAX	MIN	MAX	
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
$V_{CE}(\text{SAT})$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.150		0.150	V
$V_{CE}(\text{SAT})$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.500		0.500	V
$V_{BE}(\text{SAT})$	$I_C=100\text{mA}, I_B=10\text{mA}$	0.70	0.88	0.70	0.88	V
$V_{BE}(\text{SAT})$	$I_C=500\text{mA}, I_B=50\text{mA}$	0.80	1.0	0.80	1.0	V
$V_{BE}(\text{ON})$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	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	$k\Omega$
h_{oe}	$V_{CE}=10\text{V}, I_E=1.0\text{mA}, f=1.0\text{kHz}$		45		170	μmos
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	$V_{CE}=5.0\text{V}, I_E=100\mu\text{A}, BW=15.7\text{kHz}, R_s=5.0K\Omega$ $f=10\text{Hz}, \text{to } 10\text{kHz}$		5.0		3.0	dB
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		37TYP		ns
t_{off}	$V_{CC}=30\text{V}, I_C(\text{ON})=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$	400TYP		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 (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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