

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

PN4354  
PN4355  
PN4356

PNP SILICON TRANSISTOR

JEDEC TO-92 CASE (EBC)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR PN4354 series types are Epitaxial Planar Epoxy Molded Silicon PNP Transistors designed for general purpose amplifier and switching applications.

## MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

	SYMBOL	PN4354		UNITS
		PN4355	PN4356	
Collector-Base Voltage	V <sub>CBO</sub>	60	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	60	80	V
Emitter-Base Voltage	V <sub>EBO</sub>	5.0	5.0	V
Collector Current	I <sub>C</sub>	500	500	mA
Power Dissipation	P <sub>D</sub>	625	625	mW
Operating and Storage				
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150		°C
Thermal Resistance	θ <sub>JA</sub>	200		°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	PN4354		PN4355		PN4356		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I <sub>CBO</sub>	V <sub>CB</sub> = 50V		50		50		50	nA
I <sub>CBO</sub>	V <sub>CB</sub> = 50V, T <sub>A</sub> = 75°C		5.0		5.0		5.0	μA
I <sub>EBO</sub>	V <sub>BE</sub> = 4.0V		100		100		100	nA
BV <sub>CBO</sub>	I <sub>C</sub> = 10μA	60		60		80		V
BV <sub>CEO</sub>	I <sub>C</sub> = 10mA	60		60		80		V
BV <sub>EBO</sub>	I <sub>C</sub> = 10μA	5.0		5.0		5.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> = 150mA, I <sub>B</sub> = 15mA		0.15		0.15		0.15	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA		0.5		0.5		0.5	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> = 1.0A, I <sub>B</sub> = 100mA		-		1.0		-	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> = 150mA, I <sub>B</sub> = 15mA		0.9		0.9		0.9	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA		1.1		1.1		1.1	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> = 1.0A, I <sub>B</sub> = 100mA		-		1.2		-	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> = 0.5V, I <sub>C</sub> = 500mA		1.1		1.1		1.1	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> = 1.0V, I <sub>C</sub> = 1.0A		-		1.2		-	V

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

SYMBOL	TEST CONDITIONS	PN4354		PN4355		PN4356		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 100\mu\text{A}$	25		60		25		
$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 1.0\text{mA}$	40		75		40		
$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	50	500	100	400	50	250	
$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 100\text{mA}$	40		75		40		
$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	30		75		30		
$f_T$	$V_{CE} = 10\text{V}, I_C = 50\text{mA},$ $f = 100\text{MHz}$	100	500	100	500	100	500	MHz
$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0,$ $f = 1.0\text{MHz}$		30		30		30	pF
$C_{ib}$	$V_{CB} = 0.5\text{V}, I_C = 0,$ $f = 1.0\text{MHz}$		110		110		110	pF
$t_{on}$	$V_{CC} = 30\text{V}, I_C = 500\text{mA},$ $I_{B1} = 50\text{mA}$		100		100		100	ns
$t_{off}$	$V_{CC} = 30\text{V}, I_C = 500\text{mA},$ $I_{B1} = I_{B2} = 50\text{mA}$		400		400		400	ns
NF	$V_{CE} = 10\text{V}, I_C = 100\mu\text{A}, R_S = 1.0\text{k}\Omega,$ $f = 1.0\text{kHz}, \text{BW} = 1.0\text{Hz}$		3.0		3.0		3.0	dB

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## 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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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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