

CentralTM 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_A = 25°C)

	SYMBOL	PN4354	PN4355	PN4356	UNITS
Collector-Base Voltage	V _{CB0}	60	60	80	V
Collector-Emitter Voltage	V _{CEO}	60	60	80	V
Emitter-Base Voltage	V _{EBO}	5.0	5.0	5.0	V
Collector Current	I _C	500	500	500	mA
Power Dissipation	P _D	625	625	625	mW
Operating and Storage					
Junction Temperature	T _J , T _{stg}	-65 to +150			°C
Thermal Resistance	θ _{JA}	200			°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	PN4354		PN4355		PN4356		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	
I _{CBO}	V _{CB} = 50V		50		50		50	nA
I _{CBO}	V _{CB} = 50V, T _A = 75°C		5.0		5.0		5.0	μA
I _{EBO}	V _{BE} = 4.0V		100		100		100	nA
BV _{CB0}	I _C = 10μA	60		60		80		V
BV _{CEO}	I _C = 10mA	60		60		80		V
BV _{EBO}	I _C = 10μA	5.0		5.0		5.0		V
V _{CE(SAT)}	I _C = 150mA, I _B = 15mA		0.15		0.15		0.15	V
V _{CE(SAT)}	I _C = 500mA, I _B = 50mA		0.5		0.5		0.5	V
V _{CE(SAT)}	I _C = 1.0A, I _B = 100mA		-		1.0		-	V
V _{BE(SAT)}	I _C = 150mA, I _B = 15mA		0.9		0.9		0.9	V
V _{BE(SAT)}	I _C = 500mA, I _B = 50mA		1.1		1.1		1.1	V
V _{BE(SAT)}	I _C = 1.0A, I _B = 100mA		-		1.2		-	V
V _{BE(ON)}	V _{CE} = 0.5V, I _C = 500mA		1.1		1.1		1.1	V
V _{BE(ON)}	V _{CE} = 1.0V, I _C = 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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