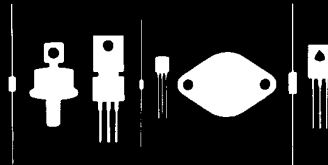


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145 Adams Avenue  
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2N4354      MPS4354  
2N4355      MPS4355  
2N4356      MPS4356

JEDEC TO-105 JEDEC TO-92(EBC)

SILICON PNP TRANSISTORS

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4354, MPS4354 series types are Silicon PNP Small Signal Transistors designed for general purpose amplifier and switching applications.

MAXIMUM RATINGS (T<sub>A</sub>=25°C)

	SYMBOL	2N4354 MPS4354	2N4355 MPS4355	2N4356 MPS4356	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	60	60	80	V
Collector-Emitter Voltage	V <sub>CEO</sub>	60	60	80	V
Emitter-Base Voltage	V <sub>EB0</sub>	5.0	5.0	5.0	V
Collector Current	I <sub>C</sub>	1.0	1.0	1.0	A
Power Dissipation, MPS Types (TO-92 CASE)	P <sub>D</sub>		625		mW
Power Dissipation, 2N Types (TO-105 CASE)	P <sub>D</sub>		350		mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>		-65 TO	+150	°C

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

SYMBOL	TEST CONDITIONS	2N4354 MPS4354		2N4355 MPS4355		2N4356 MPS4356		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I <sub>CB0</sub>	V <sub>CB</sub> =50V		50		50		50	nA
I <sub>CB0</sub>	V <sub>CB</sub> =50V, T <sub>A</sub> =75°C		5.0		5.0		5.0	μA
I <sub>EB0</sub>	V <sub>EB</sub> =4.0V		100		100		100	nA
BV <sub>CB0</sub>	I <sub>C</sub> =10μA	60		60		80		V
BV <sub>EB0</sub>	I <sub>E</sub> =10μA	5.0		5.0		5.0		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA	60		60		80		V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.15		0.15		0.15	V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.5		0.5		0.5	V
V <sub>CE</sub> (SAT)	I <sub>C</sub> =1.0A, I <sub>B</sub> =100mA		-		1.0		-	V
V <sub>BE</sub> (SAT)	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA		0.9		0.9		0.9	V
V <sub>BE</sub> (SAT)	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		1.1		1.1		1.1	V
V <sub>BE</sub> (SAT)	I <sub>C</sub> =1.0A, I <sub>B</sub> =100mA		-		1.2		-	V
V <sub>BE</sub> (ON)	V <sub>CE</sub> =0.5V, I <sub>C</sub> =500mA		1.1		1.1		1.1	V
V <sub>BE</sub> (ON)	V <sub>CE</sub> =1.0V, I <sub>C</sub> =1.0A		-		1.2		-	V
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =100μA	25		60		25		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0mA	40		75		40		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA	50	500	100	400	50	250	
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =100mA	40		75		40		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA	30		75		30		
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz	100	500	100	500	100	500	MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz		30		30		30	pF
C <sub>ib</sub>	V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz		110		110		100	pF
t <sub>on</sub>	V <sub>CC</sub> =30V, I <sub>C</sub> =500mA, I <sub>B1</sub> =50mA		100		100		100	ns
t <sub>off</sub>	V <sub>CC</sub> =30V, I <sub>C</sub> =500mA, I <sub>B1</sub> =I <sub>B2</sub> =50mA		400		400		400	ns
NF	V <sub>CE</sub> =10V, I <sub>C</sub> =100μA, R <sub>S</sub> =1.0kΩ, f=1.0kHz, BW=1.0Hz		3.0		3.0		3.0	dB