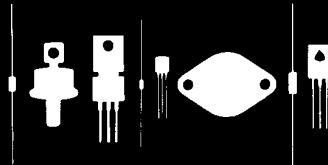


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145 Adams Avenue
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2N4354 MPS4354
2N4355 MPS4355
2N4356 MPS4356

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 ($T_A=25^\circ\text{C}$)

	SYMBOL	2N4354 MPS4354	2N4355 MPS4355	2N4356 MPS4356	UNIT
Collector-Base Voltage	V_{CB0}	60		80	V
Collector-Emitter Voltage	V_{CE0}	60		80	V
Emitter-Base Voltage	V_{EB0}	5.0		5.0	V
Collector Current	I_C	1.0		1.0	A
Power Dissipation, MPS Types (TO-92 CASE)	P_D		625		mW
Power Dissipation, 2N Types (TO-105 CASE)	P_D		350		mW
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 TO +150		$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	2N4354 MPS4354		2N4355 MPS4355		2N4356 MPS4356		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=50\text{V}$		50		50		50	nA
I_{CBO}	$V_{CB}=50\text{V}, T_A=75^\circ\text{C}$		5.0		5.0		5.0	μA
I_{EBO}	$V_{EB}=4.0\text{V}$		100		100		100	nA
BV_{CB0}	$I_C=10\mu\text{A}$	60		60		80		V
BV_{EB0}	$I_E=10\mu\text{A}$	5.0		5.0		5.0		V
BV_{CE0}	$I_C=10\text{mA}$	60		60		80		V
$V_{CE}(\text{SAT})$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.15		0.15		0.15	V
$V_{CE}(\text{SAT})$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.5		0.5		0.5	V
$V_{CE}(\text{SAT})$	$I_C=1.0\text{A}, I_B=100\text{mA}$		-		1.0		-	V
$V_{BE}(\text{SAT})$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.9		0.9		0.9	V
$V_{BE}(\text{SAT})$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.1		1.1		1.1	V
$V_{BE}(\text{SAT})$	$I_C=1.0\text{A}, I_B=100\text{mA}$		-		1.2		-	V
$V_{BE}(\text{ON})$	$V_{CE}=0.5\text{V}, I_C=500\text{mA}$		1.1		1.1		1.1	V
$V_{BE}(\text{ON})$	$V_{CE}=1.0\text{V}, I_C=1.0\text{A}$		-		1.2		-	V
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}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		110		110		100	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	$V_{CE}=10\text{V}, I_C=100\mu\text{A}, R_S=1.0\text{k}\Omega,$ $f=1.0\text{kHz}, BW=1.0\text{Hz}$		3.0		3.0		3.0	dB

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