

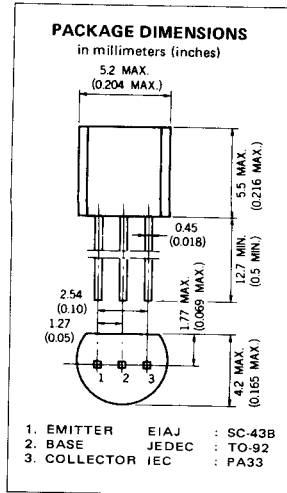
**PNP SILICON TRANSISTOR**  
**2SA1153**

**DESCRIPTION** The 2SA1153 is designed for general purpose amplifier and high speed switching applications.

- FEATURES**
- High Frequency Current Gain.
  - High Speed Switching.
  - Small Output Capacitance.
  - Low Collector Saturation Voltage.
  - Complementary to the NEC 2SC2720 NPN transistor.

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub> = 25 °C)**

<b>Maximum Temperatures</b>	
Storage Temperature	..... -55 to +150 °C
Junction Temperature	..... 150 °C Maximum
<b>Maximum Power Dissipation (T<sub>a</sub> = 25 °C)</b>	
Total Power Dissipation	..... 600 mW
<b>Maximum Voltages and Current (T<sub>a</sub> = 25 °C)</b>	
V <sub>CB0</sub> Collector to Base Voltage	..... -60 V
V <sub>CEO</sub> Collector to Emitter Voltage	..... -40 V
V <sub>EB0</sub> Emitter to Base Voltage	..... -5.0 V
I <sub>C</sub> Collector Current (DC)	..... -500 mA



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)**

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
t <sub>on</sub>	Turn-on Time			35	ns	See Test Circuit.
t <sub>off</sub>	Turn off Time			255	ns	See Test Circuit.
t <sub>stg</sub>	Storage Time			225	ns	See Test Circuit.
f <sub>T</sub>	Gain Bandwidth Product	150	400		MHz	V <sub>CE</sub> = -10 V, I <sub>E</sub> = 20 mA
C <sub>ob</sub>	Output Capacitance		5.0	8.0	pF	V <sub>CB</sub> = -10 V, I <sub>E</sub> = 0, f = 1 MHz
h <sub>FE1</sub> *	DC Current Gain	50	140	300	-	V <sub>CE</sub> = -2.0 V, I <sub>C</sub> = -150 mA
h <sub>FE2</sub> *	DC Current Gain	20	50		-	V <sub>CE</sub> = -2.0 V, I <sub>C</sub> = -500 mA
V <sub>CE(sat)</sub> *	Collector Saturation Voltage		-0.45	-0.75	V	I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50 mA
V <sub>BE(sat)</sub> *	Base Saturation Voltage		-1.0	-1.3	V	I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50 mA
I <sub>CBO</sub>	Collector Cutoff Current			-0.1	μA	V <sub>CB</sub> = -40 V, I <sub>E</sub> = 0
I <sub>EBO</sub>	Emitter Cutoff Current			-0.1	μA	V <sub>EB</sub> = -4.0 V, I <sub>C</sub> = 0

\*Pulsed PW ≤ 350 μs, Duty Cycle ≤ 2 %