

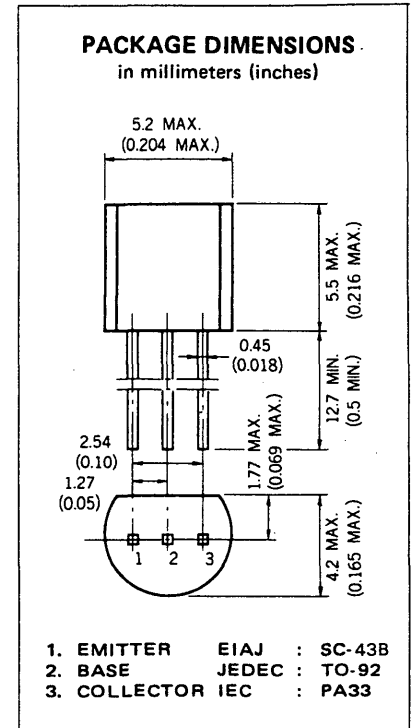
**DESCRIPTION** The 2SA1206 is designed for general purpose amplifier and high speed switching applications.

- FEATURES**
- High Frequency Current Gain.
  - High Speed Switching.
  - Small Output Capacitance.
  - Low Collector Saturation Voltage.

**ABSOLUTE MAXIMUM RATINGS (Ta=25 °C)**

Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Junction Temperature	150 °C Maximum
Maximum Power Dissipation (Ta=25 °C)	
Total Power Dissipation	600 mW
Maximum Voltages and Currents (Ta=25 °C)	
V <sub>CBO</sub> Collector to Base Voltage	-15 V
V <sub>CEO</sub> Collector to Emitter Voltage	-15 V
V <sub>EBO</sub> Emitter to Base Voltage	-4.5 V
I <sub>C</sub> Collector Current (D.C.)	-50 mA
I <sub>C</sub> Collector Current (pulse) *	-100 mA

\* PW ≤ 2 ms, duty cycle ≤ 50 %

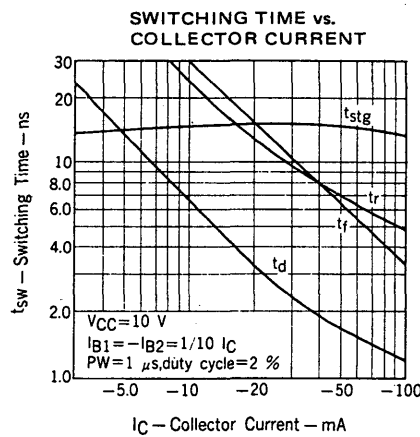
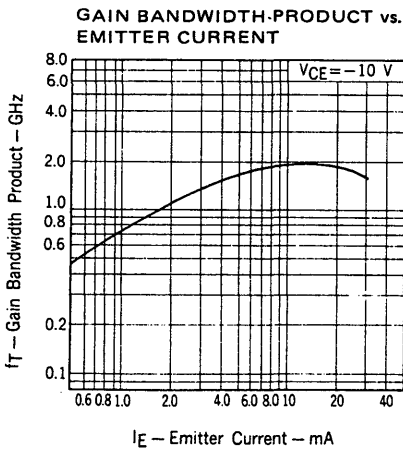
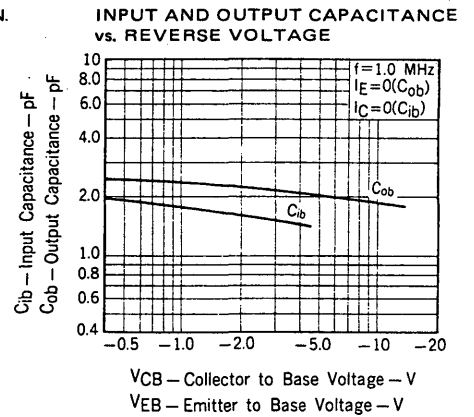
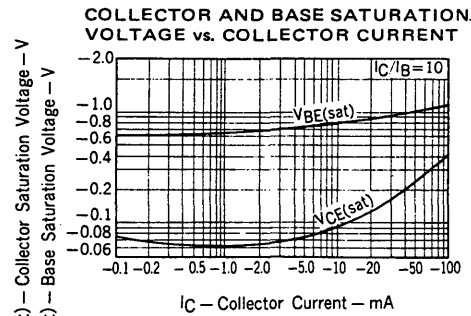
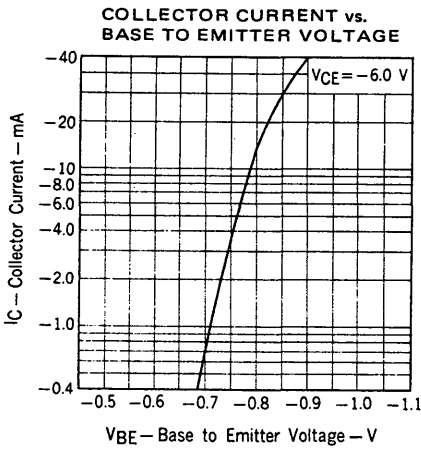
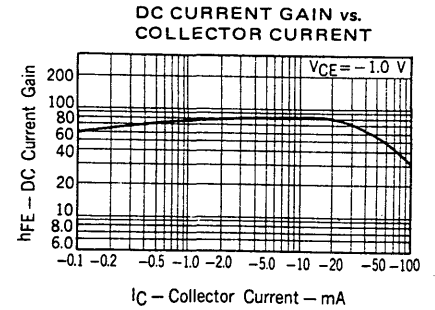
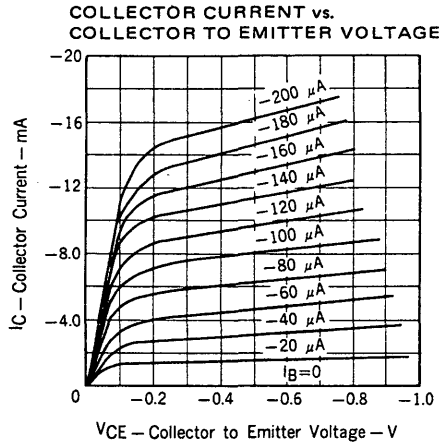
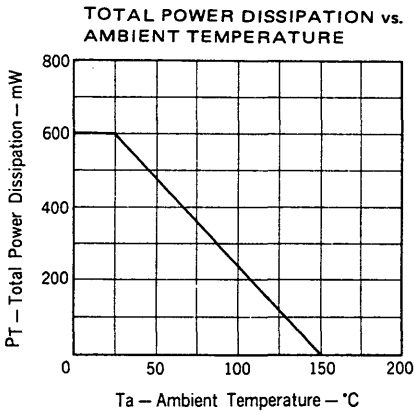


**ELECTRICAL CHARACTERISTICS (Ta=25 °C)**

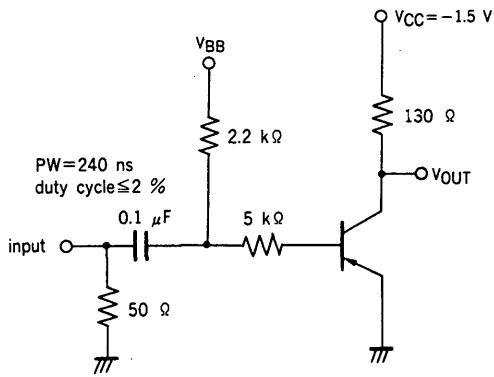
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
t <sub>on</sub>	Turn-on Time		9.0	20	ns	See test circuit.
t <sub>off</sub>	Turn-off Time		19	40	ns	See test circuit.
t <sub>stg</sub>	Storage Time		16	40	ns	See test circuit.
f <sub>T</sub>	Gain Bandwidth Product	800	1800		MHz	V <sub>CE</sub> = -10 V, I <sub>E</sub> = 10 mA, f = 100 MHz
C <sub>ob</sub>	Output Capacitance		2.0	3.0	pF	V <sub>CB</sub> = -5.0 V, I <sub>E</sub> = 0, f = 1 MHz
h <sub>FE1</sub> *	DC Current Gain	50	80	150	-	V <sub>CE</sub> = -1.0 V, I <sub>C</sub> = -10 mA
h <sub>FE2</sub> *	DC Current Gain	30	70		-	V <sub>CE</sub> = -1.0 V, I <sub>C</sub> = -1.0 mA
V <sub>CE(sat)</sub> *	Collector Saturation Voltage		-0.09	-0.20	V	I <sub>C</sub> = -10 mA, I <sub>B</sub> = -1.0 mA
V <sub>BE(sat)</sub> *	Base Saturation Voltage		-0.80	-0.95	V	I <sub>C</sub> = -10 mA, I <sub>B</sub> = -1.0 mA
I <sub>CBO</sub>	Collector Cutoff Current			-0.1	μA	V <sub>CB</sub> = -8.0 V, I <sub>E</sub> = 0
I <sub>EBO</sub>	Emitter Cutoff Current			-0.1	μA	V <sub>EB</sub> = -3.0 V, I <sub>C</sub> = 0

\* Pulsed PW ≤ 350 μs, duty cycle ≤ 2 %

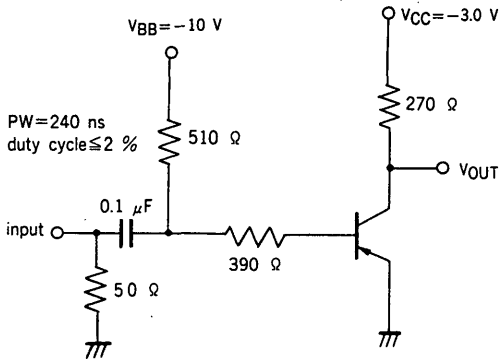
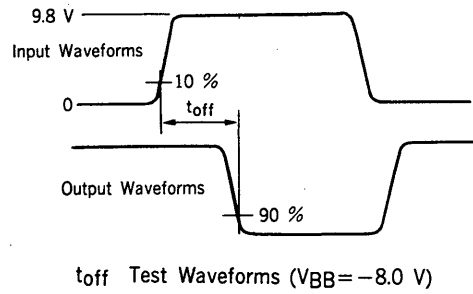
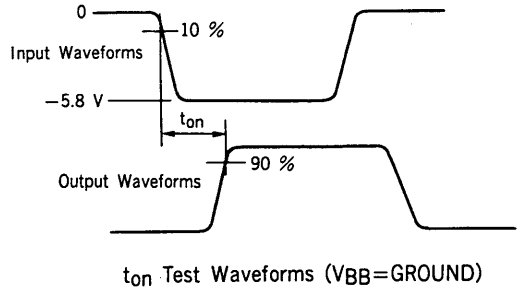
TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )



SWITCHING TIME TEST CIRCUIT



ton, toff Test Circuit



tstg Test Circuit

