

DESCRIPTION The 2SA1460 is designed for power amplifier and high speed switching applications.

- FEATURES**
- High speed, high voltage switching.
 - Low Collector Saturation Voltage.
 - Complementary to the NEC 2SC3733 NPN transistor.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature -55 to +150 °C

Junction Temperature 150 °C Maximum

Maximum Power Dissipation (T_a = 25 °C)

Total Power Dissipation 1.0 W

Maximum Voltages and Currents (T_a = 25 °C)

V_{CB0} Collector to Base Voltage -60 V

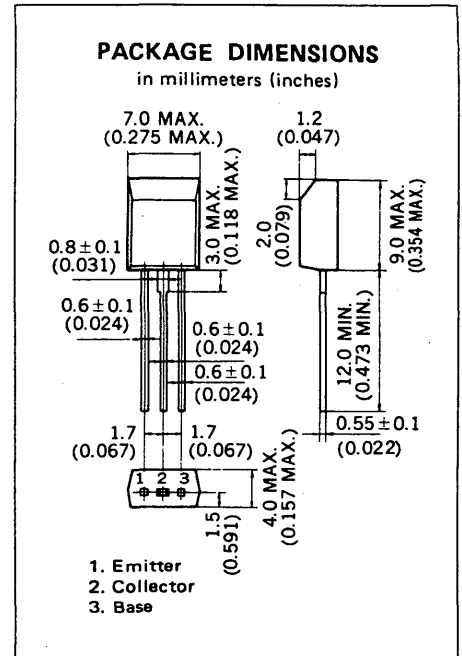
V_{CEO} Collector to Emitter Voltage -45 V

V_{EBO} Emitter Base Voltage -5.0 V

I_{C(DC)} Collector Current (DC) -1.0 A

I_{C(pulse)} Collector Current (pulse)*. . . . -2.0 A

* PW ≤ 10 ms, Duty Cycle ≤ 50 %



ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
t _{on}	Turn-on Time		25	40	ns	V _{CC} = -10 V I _C = -500 mA I _{B1} = -I _{B2} = -50 mA
t _{stg}	Storage Time		46	70	ns	
t _{off}	Turn-off Time		62	100	ns	
f _T	Gain Bandwidth Product	300	400		MHz	V _{CE} = -10 V, I _E = 100 mA
C _{ob}	Output Capacitance		11	25	pF	V _{CB} = -10 V, I _E = 0, f = 1 MHz
h _{FE1} *	DC Current Gain	60	120	200	-	V _{CE} = -10 V, I _C = -50 mA
h _{FE2} *	DC Current Gain	60	150		-	V _{CE} = -10 V, I _C = -500 mA
V _{CE(sat)} *	Collector Saturation Voltage		-0.26	-0.60	V	I _C = -500 mA, I _B = -50 mA
V _{BE(sat)} *	Base Saturation Voltage		-0.98	-1.20	V	I _C = -500 mA, I _B = -50 mA
I _{CES}	Collector Cutoff Current			-0.5	μA	V _{CB} = -45 V, R _{BE} = 0
I _{EBO}	Emitter Cutoff Current			-0.5	μA	V _{EB} = -4.0 V, I _C = 0

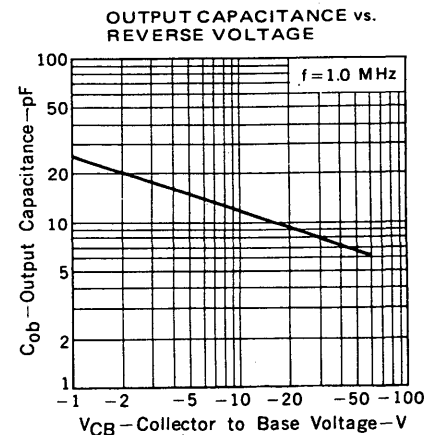
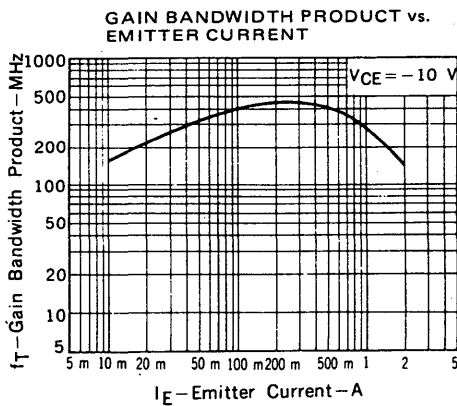
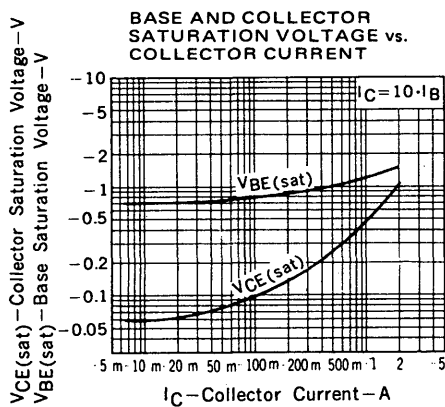
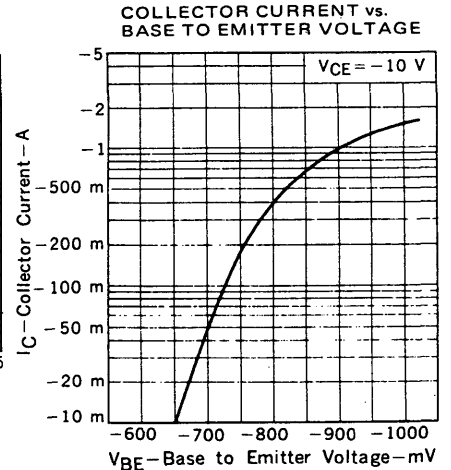
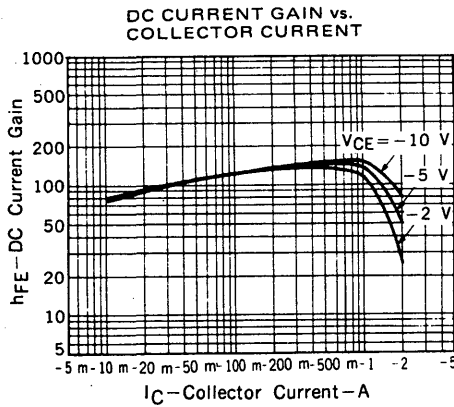
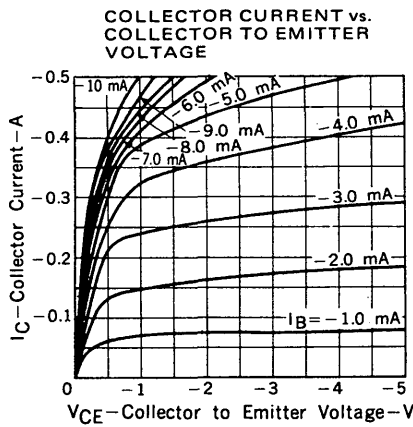
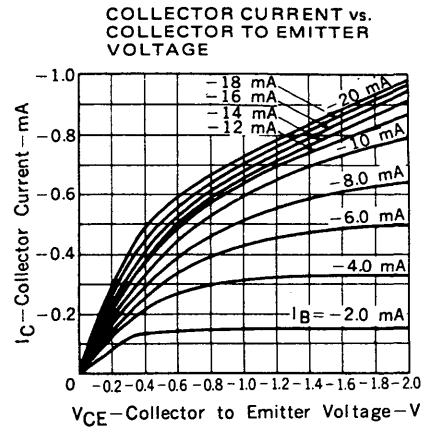
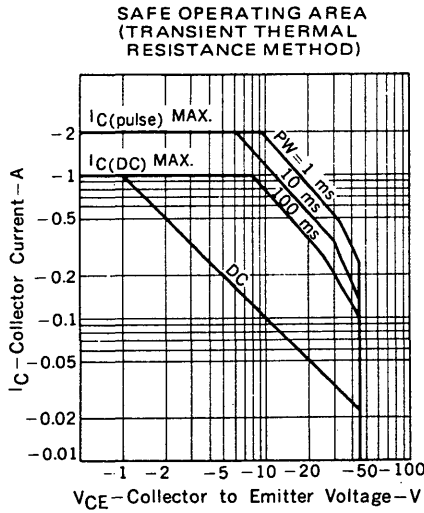
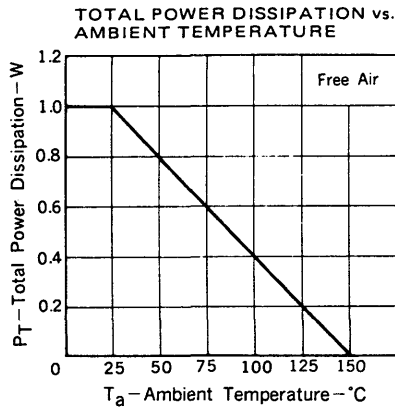
* Pulsed PW ≤ 350 μs, Duty Cycle ≤ 2 %

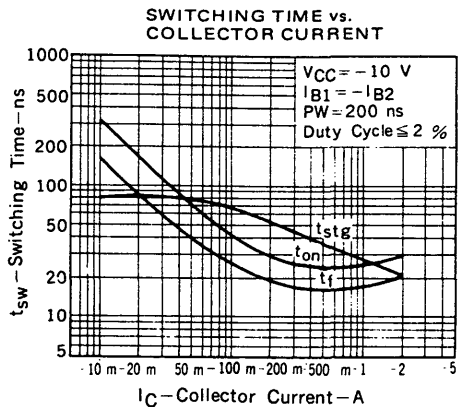
Classification of h_{FE1}

Rank	L	K
Range	60 to 120	100 to 200

h_{FE1} Test Conditions: V_{CE} = -10 V, I_C = -50 mA

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





SWITCHING TIME TEST CIRCUIT

