

DESCRIPTION The 2SC1841 is designed for use in AF amplifier, driver and low speed switching.

- FEATURES**
- High Voltage $V_{CEO} : 120 \text{ V}$
 - High h_{FE} $h_{FE} : 600 \text{ TYP. } (V_{CE} = 6.0 \text{ V, } I_C = 1.0 \text{ mA})$

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature $-55 \text{ to } +125 \text{ }^\circ\text{C}$

Junction Temperature $+125 \text{ }^\circ\text{C}$ Maximum

Maximum Power Dissipation ($T_a = 25 \text{ }^\circ\text{C}$)

Total Power Dissipation 500 mW

Maximum Voltages and Currents ($T_a = 25 \text{ }^\circ\text{C}$)

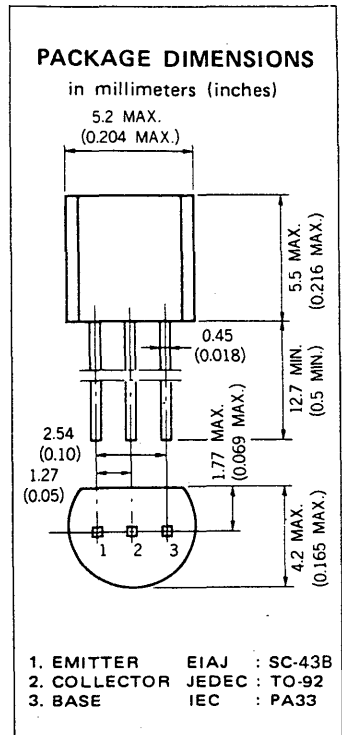
V_{CBO} Collector to Base Voltage 120 V

V_{CEO} Collector to Emitter Voltage 120 V

V_{EBO} Emitter to Base Voltage 5.0 V

I_C Collector Current 50 mA

I_B Base Current 10 mA



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

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}	DC Current Gain	150	580			$V_{CE} = 6.0 \text{ V, } I_C = 0.1 \text{ mA}$
h_{FE2}	DC Current Gain	200	600	1200		$V_{CE} = 6.0 \text{ V, } I_C = 1.0 \text{ mA}$
f_T	Gain Bandwidth Product	50	110		MHz	$V_{CE} = 6.0 \text{ V, } I_E = -1.0 \text{ mA}$
C_{ob}	Output Capacitance		1.6	2.5	pF	$V_{CB} = 30 \text{ V, } I_E = 0, f = 1.0 \text{ MHz}$
I_{CBO}	Collector Cutoff Current			50	nA	$V_{CB} = 120 \text{ V, } I_E = 0$
I_{EBO}	Emitter Cutoff Current			50	nA	$V_{EB} = 5.0 \text{ V, } I_C = 0$
V_{BE}	Base to Emitter Voltage	550	590	650	mV	$V_{CE} = 6.0 \text{ V, } I_C = 1.0 \text{ mA}$
$V_{BE(sat)}$	Base Saturation Voltage		0.73	1.0	V	$I_C = 10 \text{ mA, } I_B = 1.0 \text{ mA}$
$V_{CE(sat)}$	Collector Saturation Voltage		70	300	mV	$I_C = 10 \text{ mA, } I_B = 1.0 \text{ mA}$

Classification of h_{FE2}

Rank	P	F	E	U
Range	200 - 400	300 - 600	400 - 800	600 - 1200

h_{FE} Test Conditions : $V_{CE} = 6.0 \text{ V, } I_C = 1.0 \text{ mA}$

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

