

RoHS Compliant Product

A suffix of "-C" specifies halogen and lead free

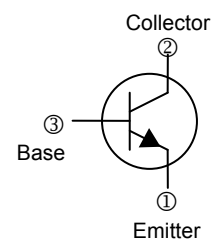
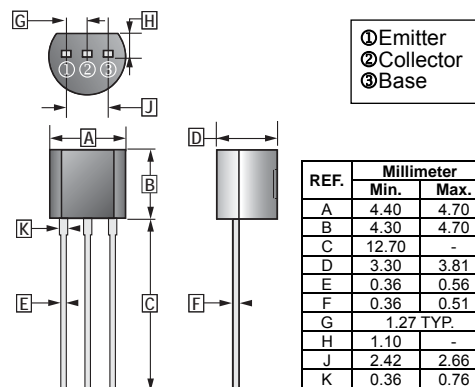
### FEATURES

- Audio amplifier
- Flash unit of camera
- Switching circuit

### CLASSIFICATION OF $h_{FE(2)}$

Rank	R	T	V
Range	340 - 600	560 - 950	900 - 2000

### TO-92



### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector - Base Voltage	$V_{CBO}$	42	V
Collector - Emitter Voltage	$V_{CEO}$	22	V
Emitter - Base Voltage	$V_{EBO}$	6	V
Collector Current - Continuous	$I_C$	5	A
Collector Power Dissipation	$P_C$	750	mW
Junction, Storage Temperature	$T_J, T_{STG}$	+150, -55 ~ +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	42	-	-	V	$I_C = 0.1\text{mA}, I_E = 0$
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	22	-	-	V	$I_C = 1\text{mA}, I_B = 0$
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E = 10\ \mu\text{A}, I_C = 0$
Collector Cut - Off Current	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	$V_{CB} = 30\text{V}, I_E = 0$
Emitter Cut - Off Current	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	$V_{EB} = 6\text{V}, I_C = 0$
DC Current Gain	$h_{FE(1)}$	150	-	-		$V_{CE} = 2\text{V}, I_C = 0.15\text{mA}$
	$h_{FE(2)}$	340	-	2000		$V_{CE} = 2\text{V}, I_C = 500\text{mA}$
	$h_{FE(3)}$	150	-	-		$V_{CE} = 2\text{V}, I_C = 2\text{A}$
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.35	V	$I_C = 3000\text{mA}, I_B = 100\text{mA}$
Transition Frequency	$f_T$	-	150	-	MHz	$V_{CE} = 6\text{V}, I_C = 50\text{mA}, f = 30\text{MHz}$

**CHARACTERISTIC CURVES**

Fig.1 Static characteristics

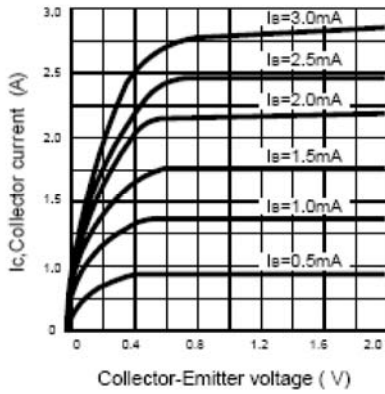


Fig.2 DC current Gain

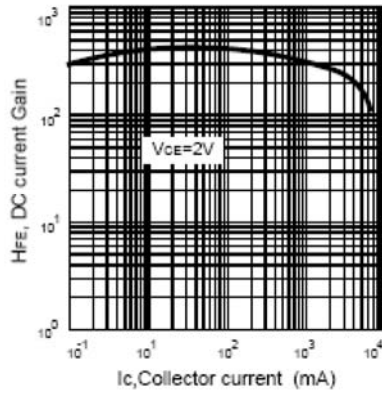


Fig.3 Base-Emitter on Voltage

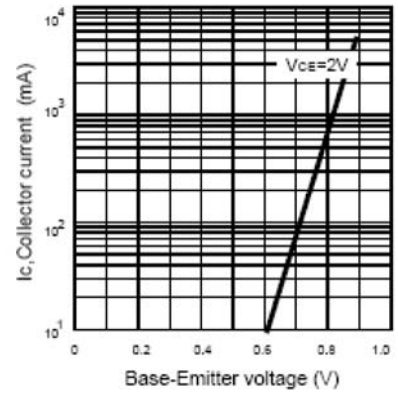


Fig.4 Saturation voltage

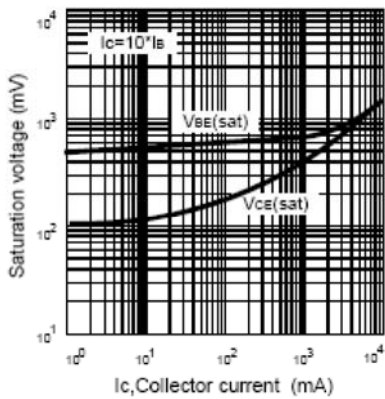


Fig.5 Current gain-bandwidth product

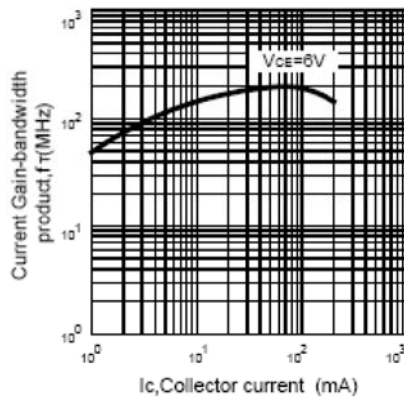


Fig.6 Collector output Capacitance

