

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

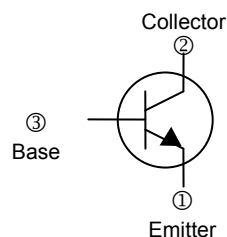
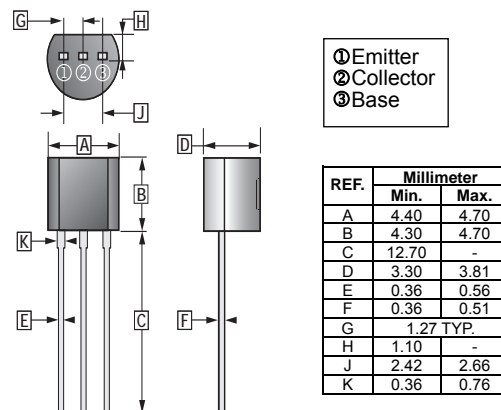
FEATURES

TO-92

- General Purpose Switching and Amplification.

CLASSIFICATION OF h_{FE} (1)

Product-Rank	8050SST-B	8050SST-C	8050SST-D
Range	85~160	120~200	160~300



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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	1.5	A
Collector Power Dissipation	P_C	1	W
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	125	$^\circ\text{C} / \text{W}$
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 condition
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	40	-	-	V	$I_C=0.1\text{mA}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	25	-	-	V	$I_C=0.1\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=0.1\text{mA}, I_C=0$
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=40\text{V}, I_E=0$
Collector Cut-Off Current	I_{CEO}	-	-	0.1	μA	$V_{CE}=20\text{V}, I_B=0$
Emitter Cut-Off Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	$h_{FE(1)}$	85	-	300		$V_{CE}=1\text{V}, I_C=100\text{mA}$
	$h_{FE(2)}$	40	-	-		$V_{CE}=1\text{V}, I_C=800\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.5	V	$I_C=800\text{mA}, I_B=80\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1.2	V	$I_C=800\text{mA}, I_B=80\text{mA}$
Base to Emitter Voltage	V_{BE}	-	-	1	V	$V_{CE}=1\text{V}, I_C=10\text{mA}$
Transition Frequency	f_T	100	-	-	MHz	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=30\text{MHz}$
Collector Output Capacitance	C_{ob}	-	-	15	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

RATINGS AND CHARACTERISTIC CURVES

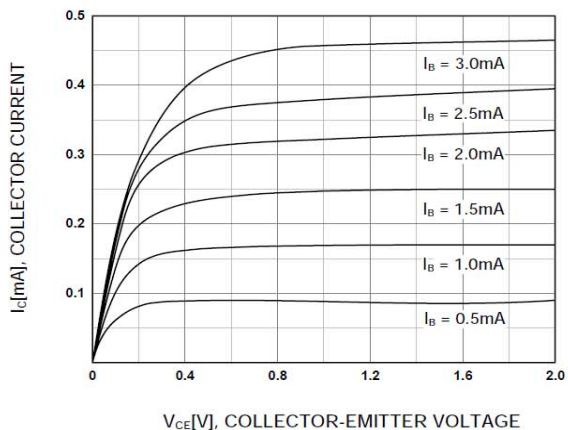


Figure 1. Static Characteristic

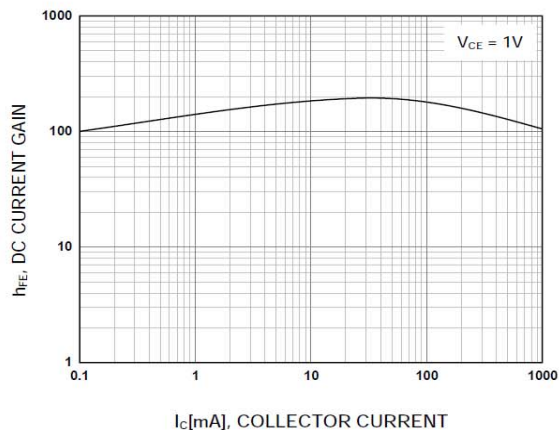
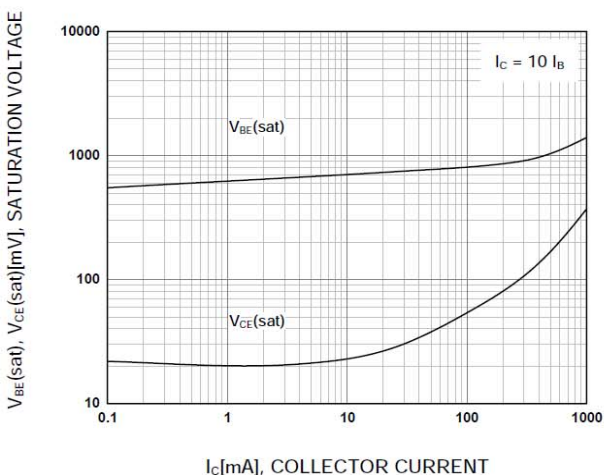


Figure 2. DC current Gain



**Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

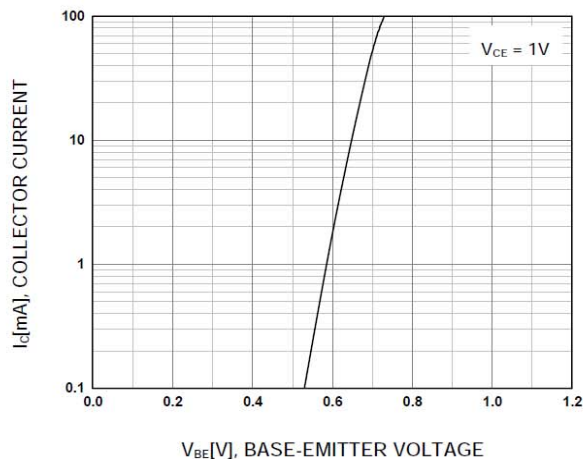


Figure 4. Base-Emitter On Voltage

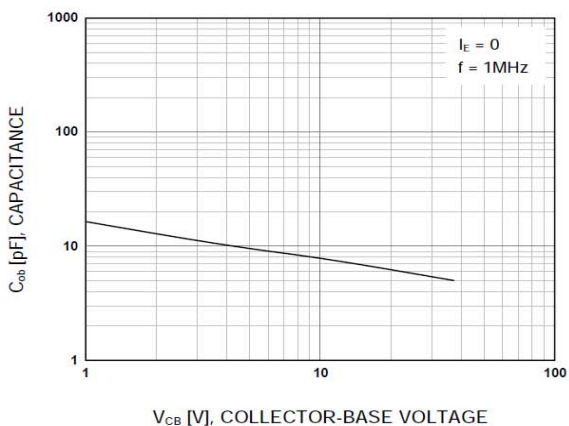


Figure 5. Collector Output Capacitance

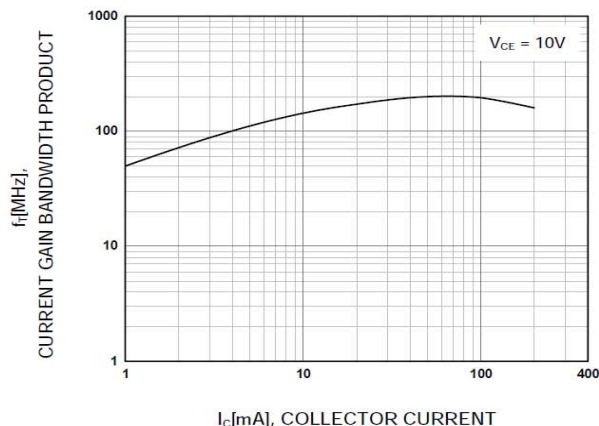


Figure 6. Current Gain Bandwidth Product