



**SS8050** TRANSISTOR (NPN)

**FEATURES**

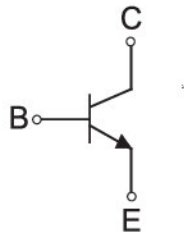
- Power Dissipation
  - $P_{CM} : 1\text{ W}$  ( $T_a=25^\circ\text{C}$ )
  - $: 2\text{ W}$  ( $T_c=25^\circ\text{C}$ )



**TO-92**

1. EMITTER
2. BASE
3. COLLECTOR

**Equivalent Circuit**



**ORDERING INFORMATION**

Part Number	Package	Packing Method	Pack Quantity
SS8050	TO-92	Bulk	1000pcs/Bag
SS8050-TA	TO-92	Tape	2000pcs/Box

**MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$  unless otherwise noted)**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	1.5	A
$P_D$	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	$^\circ\text{C} / \text{W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

$T_a=25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1\text{mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=40\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{CEO}$	$V_{CE}=20\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=100\text{mA}$	85		400	
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=800\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=800\text{mA}, I_B=80\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=800\text{mA}, I_B=80\text{mA}$			1.2	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=1\text{V}, I_C=10\text{mA}$			1	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=30\text{MHz}$	100			MHz

### CLASSIFICATION OF $h_{FE(1)}$

Rank	B	C	D	D3
Range	85-160	120-200	160-300	300-400

# Typical Characteristics

