



**S8050-B**  
**S8050-C**  
**S8050-D**

**NPN Silicon Transistors**

**Features**

- TO-92 Plastic-Encapsulate Transistors
- Capable of 0.625Watts( $T_{amb}=25^{\circ}C$ ) of Power Dissipation.
- Collector-current 0.5A
- Collector-base Voltage 40V
- Operating and storage junction temperature range:  $-55^{\circ}C$  to  $+150^{\circ}C$
- Marking : S8050
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Halogen free available upon request by adding suffix "-HF"

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Symbol	Parameter	Min	Max	Units
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**OFF CHARACTERISTICS**

$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A$ , $I_E=0$ )	40	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=0.1mA$ , $I_B=0$ )	25	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A$ , $I_C=0$ )	5.0	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=40Vdc$ , $I_E=0$ )	---	0.1	$\mu A$
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=20Vdc$ , $I_B=0$ )	---	0.1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=3.0Vdc$ , $I_C=0$ )	---	0.1	$\mu A$

**ON CHARACTERISTICS**

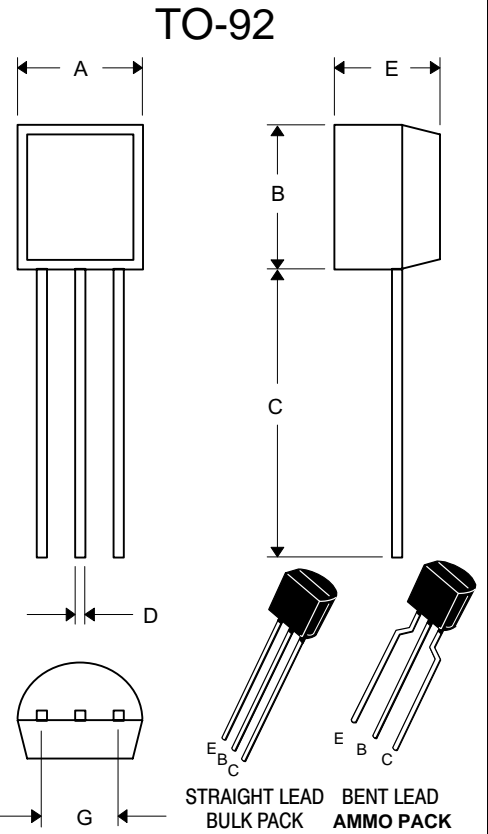
$h_{FE(1)}$	DC Current Gain ( $I_C=50mA$ , $V_{CE}=1.0Vdc$ )	85	300	---
$h_{FE(2)}$	DC Current Gain ( $I_C=500mA$ , $V_{CE}=1.0Vdc$ )	50	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=500mA$ , $I_B=50mA$ )	---	0.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=500mA$ , $I_B=50mA$ )	---	1.2	Vdc
$V_{EB}$	Base- Emitter Voltage ( $I_E=100mA$ )	---	1.4	Vdc

**SMALL-SIGNAL CHARACTERISTICS**

$f_T$	Transistor Frequency ( $I_C=20mA$ , $V_{CE}=6.0Vdc$ , $f=30MHz$ )	150	---	MHz
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**CLASSIFICATION OF  $h_{FE(1)}$**

Rank	B	C	D
Range	85-150	120-200	160-300



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

\* For ammo packing detailed specification, click here to visit our website of product packaging for details.



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## Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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