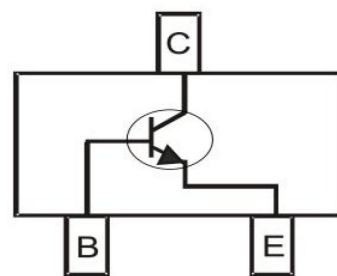


**Kingtronics**®**SS8050****BIPOLAR  
TRANSISTOR (NPN)****FEATURES**

Complementary to SS8550  
High Collector Current  
Surface Mount device

**MECHANICAL DATA**

Case: SOT-323  
Case Material: Molded Plastic. UL flammability  
Classification Rating: 94V-0  
Moisture Sensitivity: Level 1 per J-STD-020  
Weight: 0.008 grams (approximate)

**SOT-323****MAXIMUM RATINGS (T<sub>A</sub> = 25° C unless otherwise noted)**

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	25	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	1500	mA
Collector Power Dissipation	P <sub>C</sub>	250	mW
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	500	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25° C unless otherwise specified)**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	40			V	I <sub>C</sub> =100uA, I <sub>E</sub> =0
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	25			V	I <sub>C</sub> =0.1mA, I <sub>B</sub> =0
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	5			V	I <sub>E</sub> =100uA, I <sub>C</sub> =0
Collector cut-off current	I <sub>CBO</sub>			0.1	uA	V <sub>CB</sub> =40V, I <sub>E</sub> =0
Collector cut-off current	I <sub>CEO</sub>			0.1	uA	V <sub>CE</sub> =20V, I <sub>B</sub> =0
Emitter cut-off current	I <sub>EBO</sub>			0.1	uA	V <sub>EB</sub> =5V, I <sub>C</sub> =0
DC current gain	h <sub>FE</sub>	120 40		400		V <sub>CE</sub> =1V, I <sub>C</sub> =100mA V <sub>CE</sub> =1V, I <sub>C</sub> =800mA
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>			0.5	V	I <sub>C</sub> =800mA, I <sub>B</sub> =80mA
Base-emitter saturation voltage	V <sub>BE(sat)</sub>			1.2	V	I <sub>C</sub> =800mA, I <sub>B</sub> =80mA
Transition frequency	f <sub>T</sub>	100			MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=30MHz
Collector output capacitance	C <sub>ob</sub>			15	pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz

**CLASSIFICATION OF h<sub>FE</sub>**

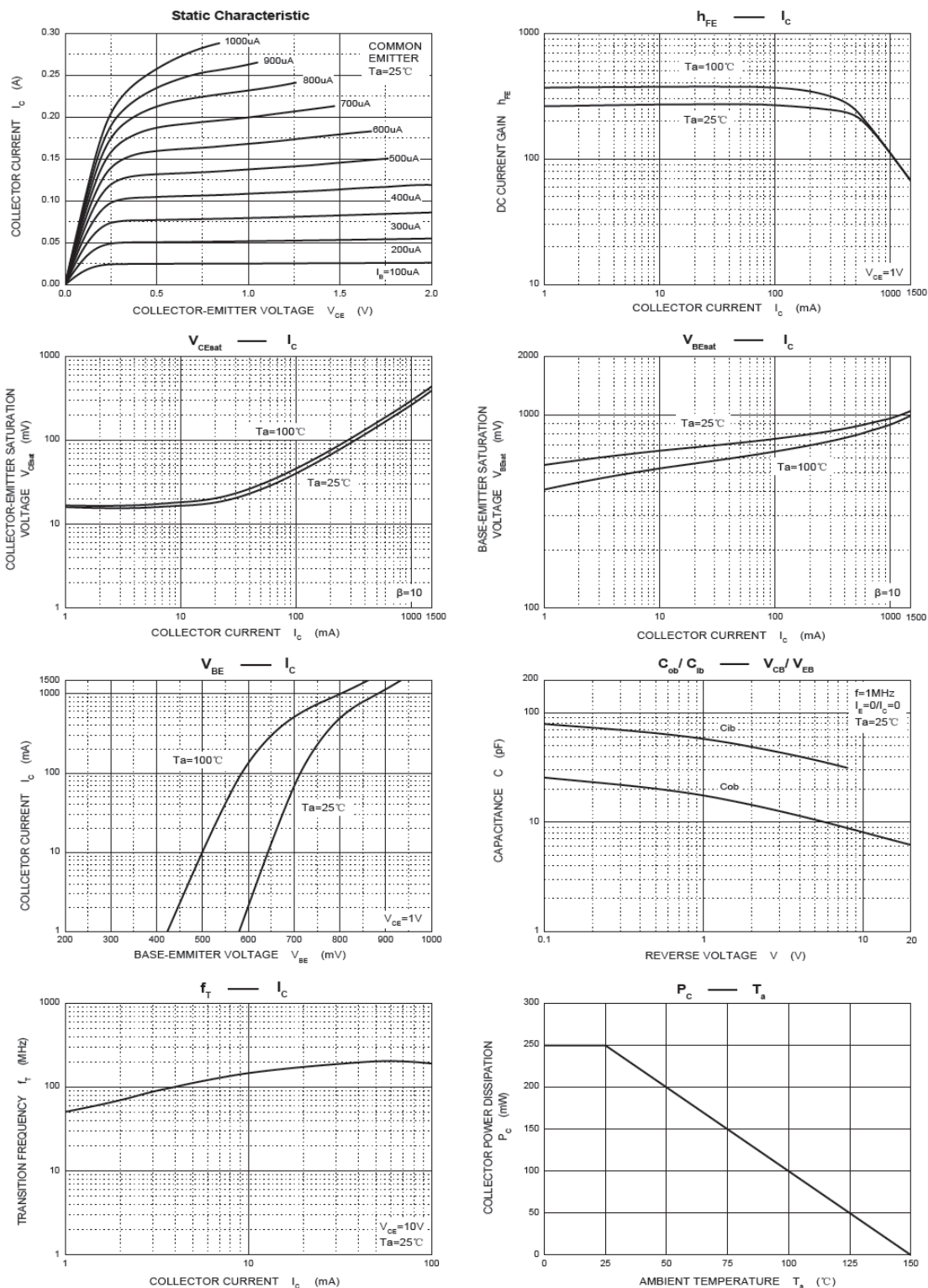
Rank	L	H	J
Range	120-200	200-350	300-400
Marking		Y1	

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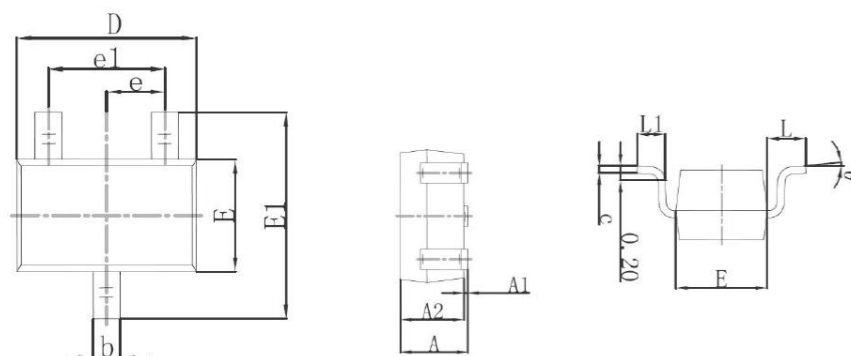
# Kingtronics®

## SS8050 BIPOLAR TRANSISTOR (NPN)

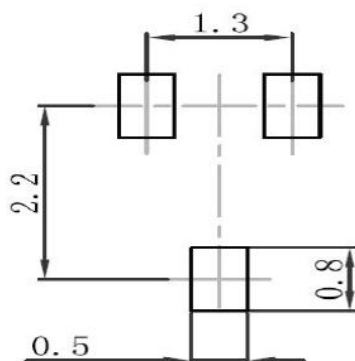
### Typical Characteristics



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**Kingtronics**®**SS8050**  
BIPOLAR  
TRANSISTOR (NPN)**SOT-323 Package Outline Dimensions**

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

**SOT-323 Suggested Pad Layout****Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

Note: Specifications are subject to change without notice.

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