

## SOT-323 Plastic-Encapsulate Transistors

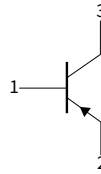
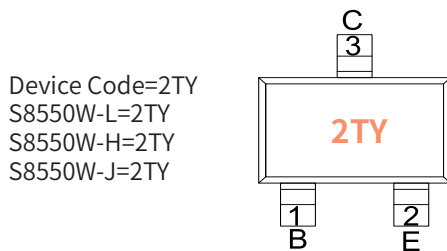
### ● Features

- Complimentary to S8050W
- Power dissipation of 200mW

### ● Mechanical Data

- Case: SOT-323  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

### ● Function Diagram

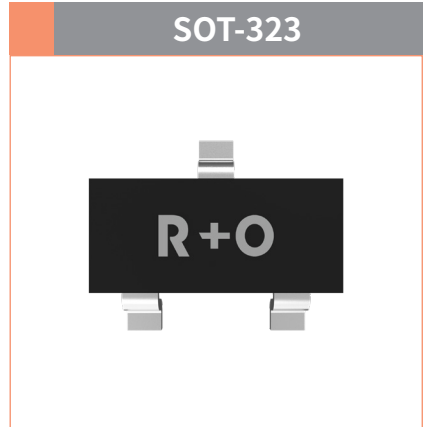


### Collector-Emitter Voltage

V<sub>CEO</sub> -25V

### Collector Current

-0.5 Ampere



### ● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-323	R1	0.005	3000	45000	180000	7"

### ● Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V <sub>CBO</sub>	V	-40
Collector-Emitter Voltage	V <sub>CEO</sub>		-25
Emitter-Base Voltage	V <sub>EBO</sub>		-5
Collector Current	I <sub>C</sub>	A	-0.5
Collector Power Dissipation	P <sub>C</sub>	mW	200
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150
Junction temperature	T <sub>j</sub>	°C	150
Typical Thermal Resistance	R <sub>θJ-A</sub>	°C /W	625

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Type	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=-100\mu A, I_E=0$	-40	—	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=-0.1mA, I_B=0$	-25	—	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=-100\mu A, I_C=0$	-5	—	—
Collector-Base cut-off current	$I_{CBO}$	nA	$V_{CB}=-40V, I_E=0$	—	—	-100
Collector-Emitter cut-off current	$I_{CEO}$		$V_{CE}=-20V, I_B=0$	—	—	-100
Emitter-Base cut-off current	$I_{EBO}$		$V_{EB}=-3.0V, I_C=0$	—	—	-100
DC Current Gain	$h_{FE(1)}$	—	$I_C=-50mA, V_{CE}=-1.0V$	120	—	400
	$h_{FE(2)}$		$I_C=-500mA, V_{CE}=-1.0V$	50	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-500mA, I_B=-50mA$	—	—	-0.6
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=-500mA, I_B=-50mA$	—	—	-1.2

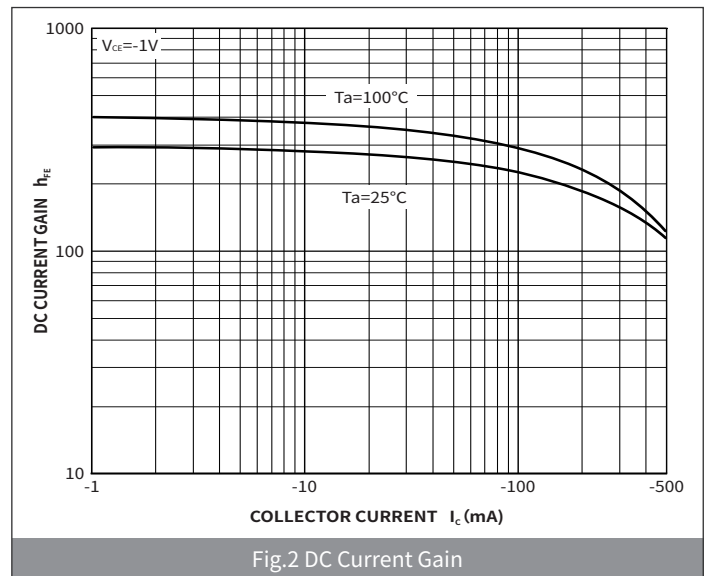
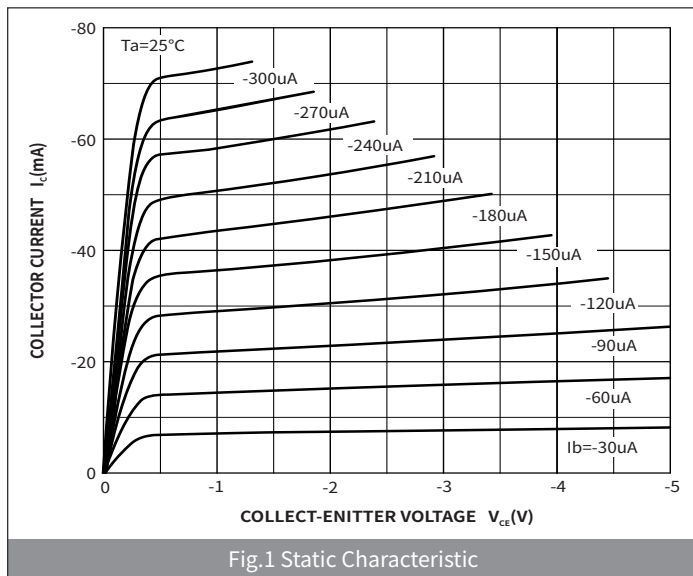
● **Small-signal Characteristics**

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	$f_T$	$I_C=-20mA, V_{CE}=-6V, f=30MHz$	MHZ	150	—	—

● **Classification Of  $h_{FE}$**

RANK	L	H	J
Range	120-200	200-350	300-400

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



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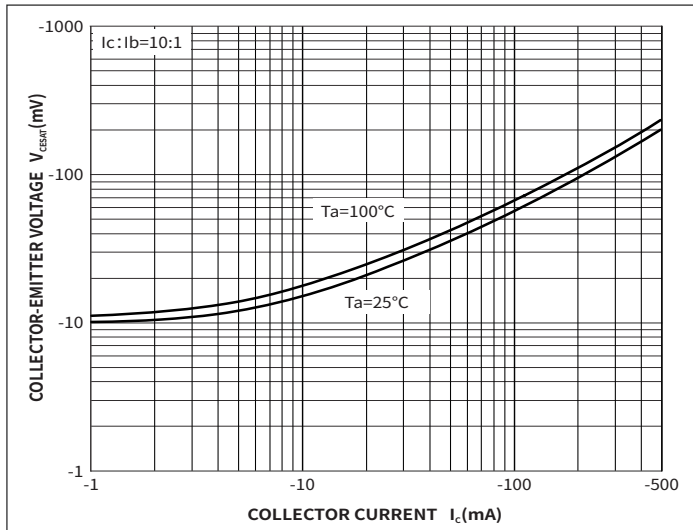


Fig.3 Collector-Emitter Saturation Voltage

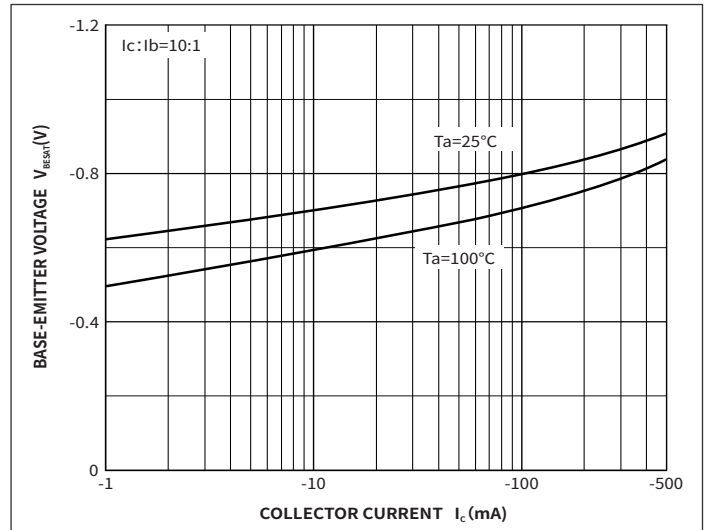


Fig.4 Base-Emitter Saturation Voltage

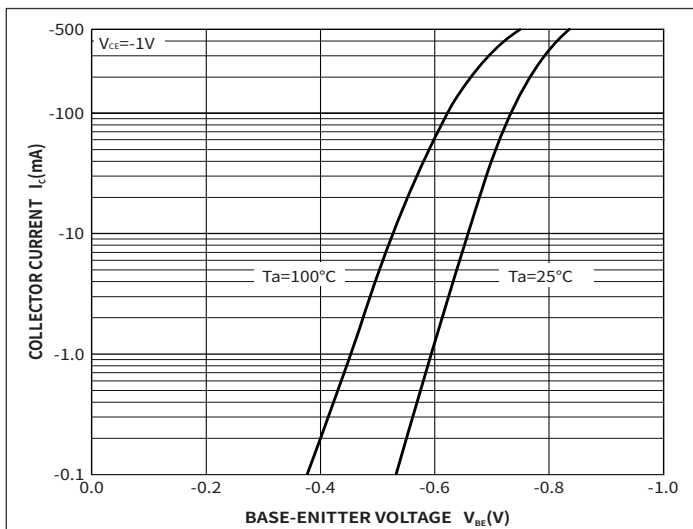


Fig.5 Base-Emitter On Voltage

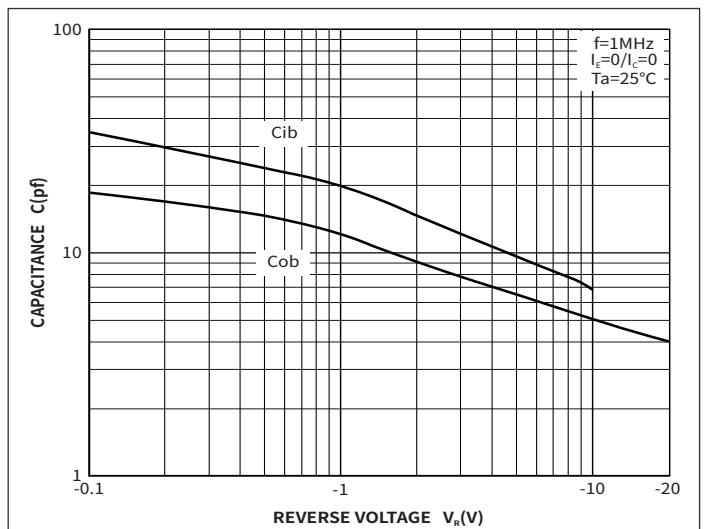


Fig.6  $C_{ob}/C_{ib}-V_{CB} V_{EB}$

# S8550W-L THRU S8550W-J

PNP TRANSISTORS

## ● Package Outline Dimensions (SOT-323)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.80	1.10	0.031	0.043
A1	-	0.10	-	0.004
A2	0.90	1.00	0.035	0.039
b	0.30	0.40	0.012	0.020
c	0.10	0.25	0.004	0.010
D	1.80	2.20	0.071	0.087
E	1.15	1.35	0.045	0.053
E1	2.00	2.2	0.079	0.086
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.15	0.45	0.006	0.018
$\theta$	-	8°	-	8°

## ● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.65	0.75	0.026	0.030
K	0.85	0.95	0.033	0.037
M	1.85	1.95	0.073	0.077
N	1.25	1.35	0.049	0.053