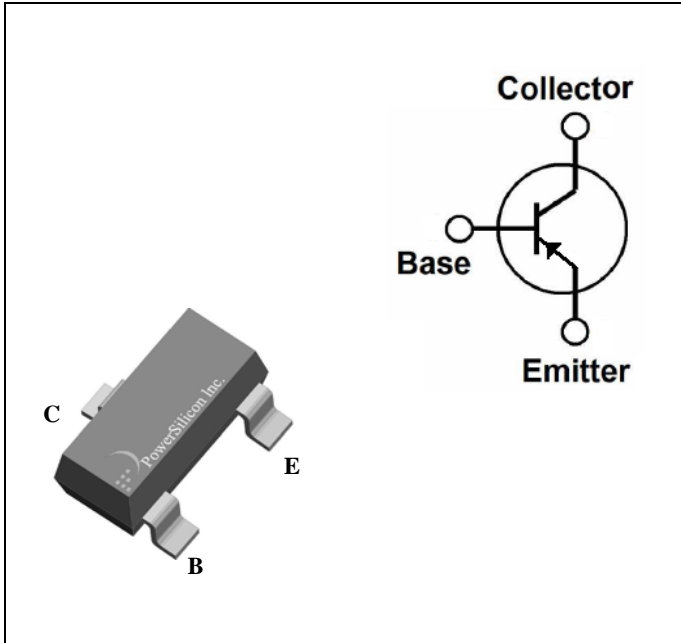


## PLASTIC-ENCAPSULATE TRANSISTORS PNP Silicon



### FEATURES

- Collector Current :  $I_C = -0.5A$

### MECHANICAL DATA

- Available in SOT-23 Package
- Solderability : MIL-STD-202, Method 208
- Full RoHS Compliance

### ORDERING INFORMATION

PART NUMBER	PACKAGE	SHIPPING	MARKING CODE
S8550□-△-T3	SOT-23	Tape Reel	2TY

**Notes:**

1. □: none is for Lead Free package;  
"G" is for Halogen Free package.
2. △: Rank Of  $h_{FE}$ ; See Classification Of  $h_{FE}$
3. Marking Code: yww: y: Year code; ww: Week code.

### THERMAL DATA

PARAMETER	SYMBOL	VALUES	UNIT
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	357	°C/W
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	90	°C/W

**Notes:**

4.  $R_{\theta JA}$  is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins.  $R_{\theta JC}$  is guaranteed by design while  $R_{\theta CA}$  is determined by the user's board design. The value of  $R_{\theta JA}$  is measured with device mounted on 1 in<sup>2</sup> FR-4 board with 2 oz copper.

**ABSOLUTE MAXIMUM RATINGS**
 $T_A = 25^\circ\text{C}$ , unless otherwise noted.

PARAMETER	SYMBOL	VALUES	UNIT
Collector-Emitter Voltage	$V_{CEO}$	-25	V
Collector-Base Voltage	$V_{CBO}$	-40	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current-Continuous	$I_C$	-0.5	A
Power Dissipation	$P_C$	0.3	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

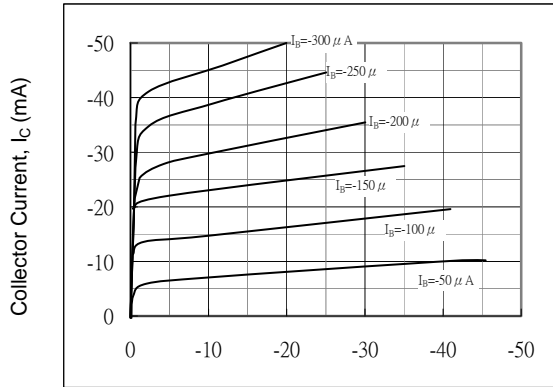
**ELECTRICAL CHARACTERISTICS**
 $T_A = 25^\circ\text{C}$ , unless otherwise noted.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-25			V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\ \mu\text{A}, I_E = 0$	-40			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\ \mu\text{A}, I_C = 0$	-5			V
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -3\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -40\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector Cut-off Current	$I_{CEO}$	$V_{CE} = -20\text{V}, I_B = 0$			-0.1	$\mu\text{A}$
<b>ON CHARACTERISTICS</b>						
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	120		350	
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -500\text{mA}$	50			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-1.2	V
<b>SMALL-SIGNAL CHARACTERISTICS</b>						
Transition Frequency	$f_T$	$I_C = -20\text{mA}, V_{CE} = -6\text{V}, f = 30\text{MHz}$	150			MHz

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

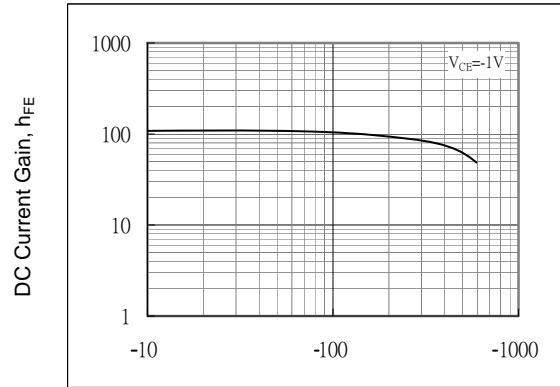
RANK	L	H
$h_{FE(1)}$ RANGE	120~200	200~350

**TYPICAL PERFORMANCE CHARACTERISTICS**



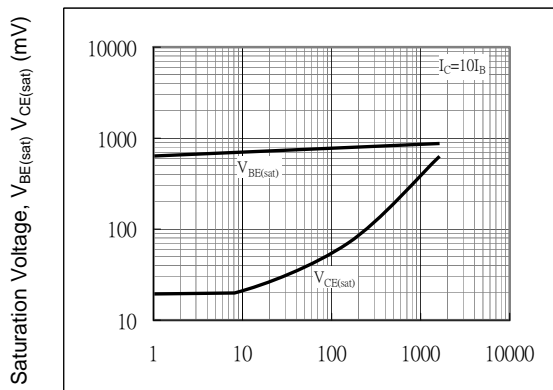
Collector-Emitter Voltage,  $V_{CE}$  (V)

Fig.- Static Characteristic



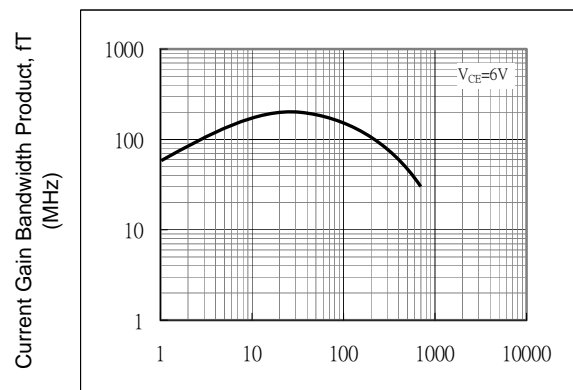
Collector Current,  $I_C$  (mA)

Fig.2 - DC Current Gain



Collector Current,  $I_C$  (mA)

Fig.3 - Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage



Collector Current,  $I_C$  (mA)

Fig.4 - Current Gain Bandwidth Product

PHYSICAL DIMENSION

Unit : Inch(Millimeter)

