

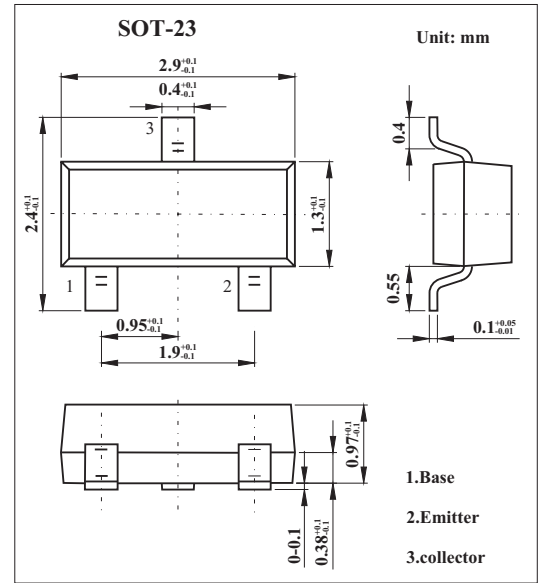
## SOT-23 Plastic-Encapsulate Transistors

### Features

- Collector Current:  $I_c=0.5A$
- NPN Transistors

### MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	40	V
Collector-Emitter Voltage	$V_{CE0}$	25	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current -Continuous	$I_c$	1.5	A
Collector Dissipation	$P_c$	0.3	W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55 to 150	°C

### PACKAGE INFORMATION

Device	Package	Shipping
S8050	SOT-23	3000/Tape&Reel

### Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CB0}$	$I_c = 100 \mu A, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_c = 1mA, I_B = 0$	25			V
Emitter-base Breakdown voltage	$V_{EB0}$	$I_E = 100 \mu A, I_c = 0$	5			V
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 40 V, I_E = 0$			0.1	$\mu A$
Collector-emitter cut-off current	$I_{CE0}$	$V_{CE} = 20 V, I_B = 0$			1	$\mu A$
Emitter-base cut-off current	$I_{EB0}$	$V_{EB} = 5 V, I_c = 0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 1 V, I_c = 100 mA$	120		400	
		$V_{CE} = 1 V, I_c = 800 mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 800 mA, I_B = 80 mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c = 800 mA, I_B = 80 mA$			1.2	V
Transition frequency	$f_T$	$V_{CE} = 10 V, I_c = 50 mA, f = 30 MHz$	100			MHz

### $h_{FE}(1)$ Classification

Type	S8050	S8050-L	S8050-H	S8050-J
Range	200-350	120-200	144-202	300-400
Marking	J3Y			