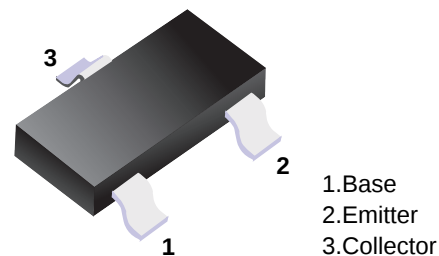


■ NPN Transistors



■ Features

- Collector Current: $I_C=0.5A$

■ Simplified outline(SOT-23)

■ Absolute Maximum Ratings $T_a = 25^{\circ}C$

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	0.5	A
Collector Dissipation	P_C	0.3	W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to 150	$^{\circ}C$

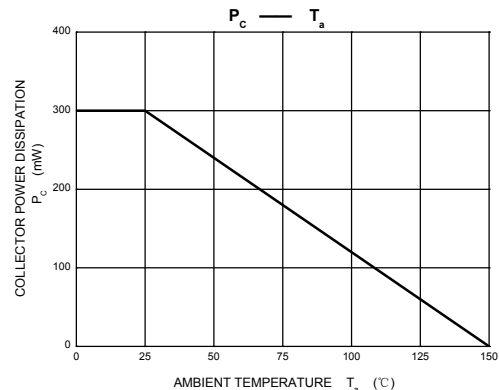
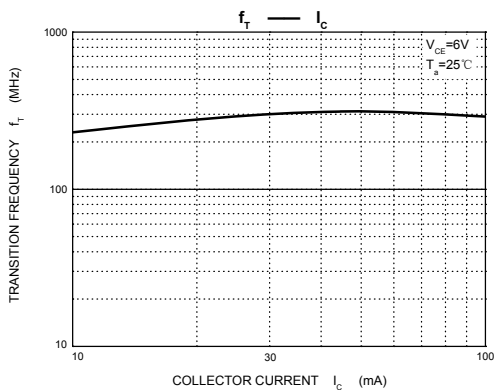
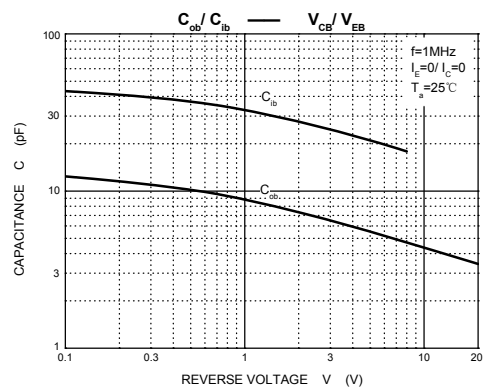
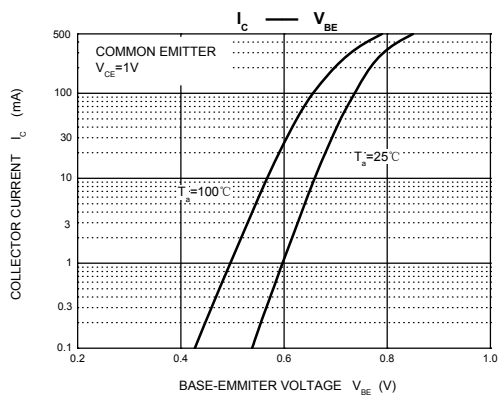
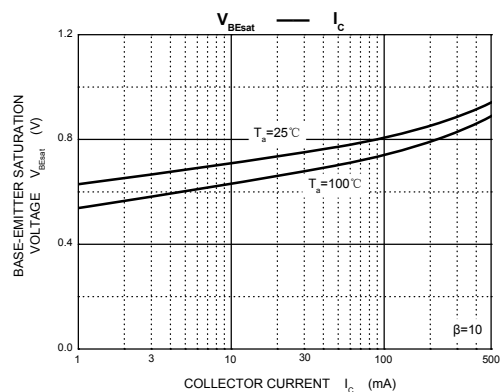
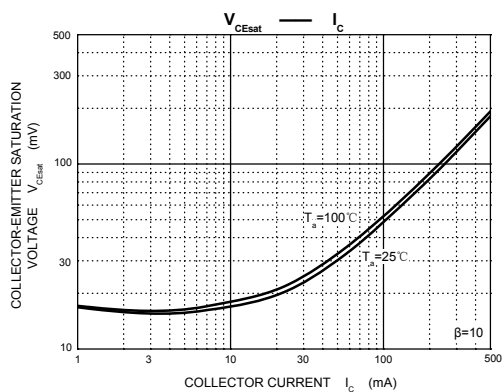
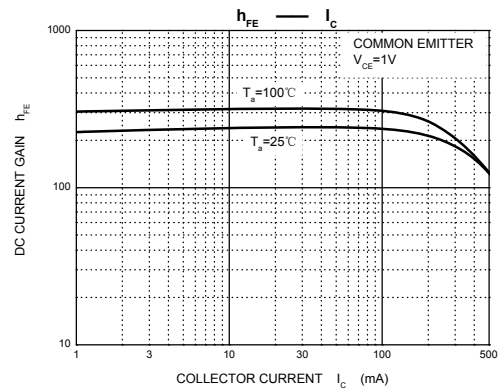
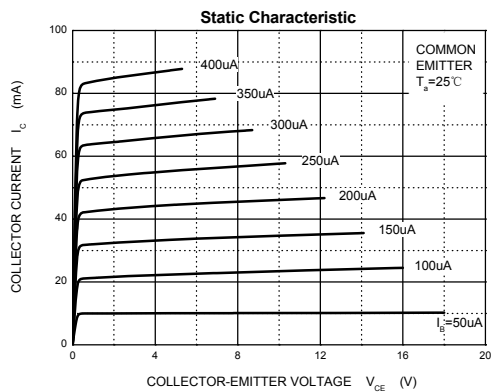
■ Electrical Characteristics $T_a = 25^{\circ}C$

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	μA
Collector-emitter cut-off current	I_{CE0}	$V_{CE} = 20 V, I_B = 0$			1	μA
Emitter-base cut-off current	I_{EB0}	$V_{EB} = 5 V, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 1 V, I_C = 50 mA$	120		400	
		$V_{CE} = 1 V, I_C = 500 mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 50 mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA, I_B = 50 mA$			1.2	V
Transition frequency	f_T	$V_{CE} = 6 V, I_C = 20 mA, f = 30 MHz$	150			MHz

■ Classification of $h_{FE}(1)$

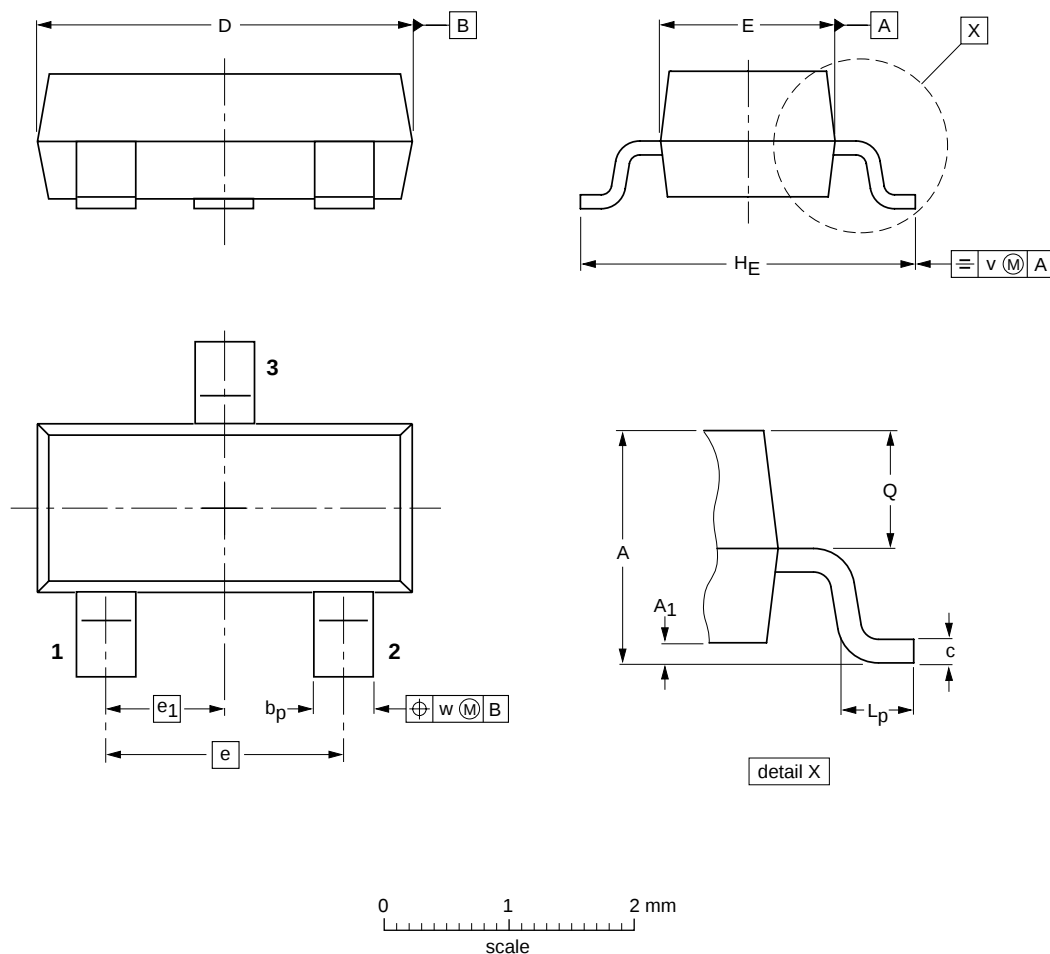
Type	S8050	S8050-L	S8050-H	S8050-J
Range	200-350	120-200	144-202	300-400
Marking	J3Y			

■ Typical Characteristics



Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1