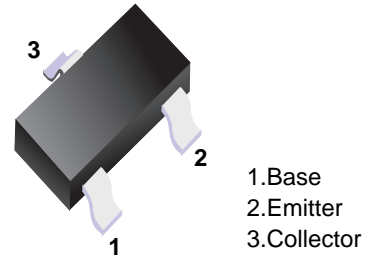


■ NPN Transistors



■ Features

- Collector Current:  $I_c=0.5A$

■ Simplified outline(SOT-323)

■ 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	$^\circ C$

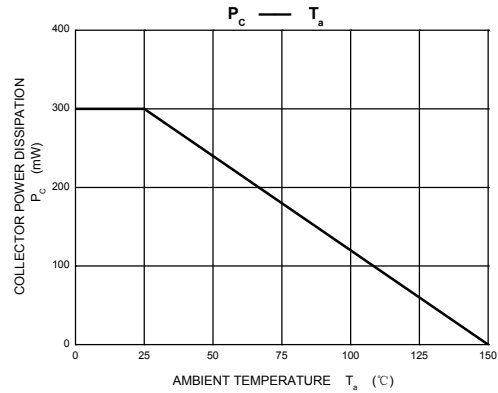
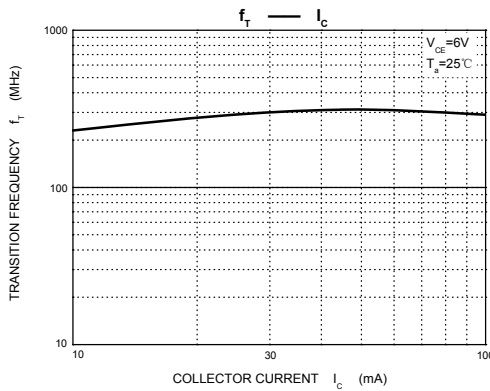
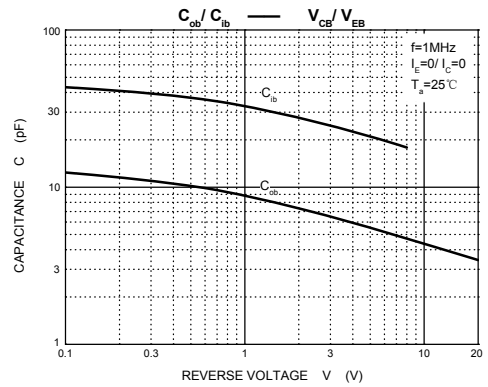
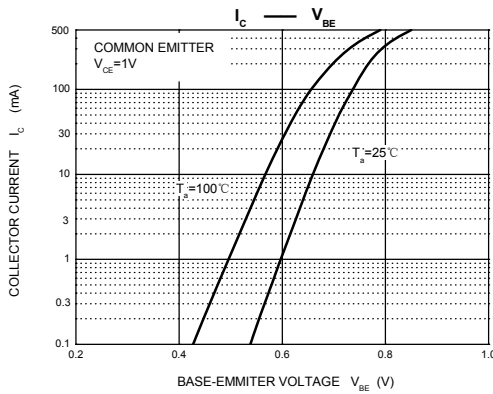
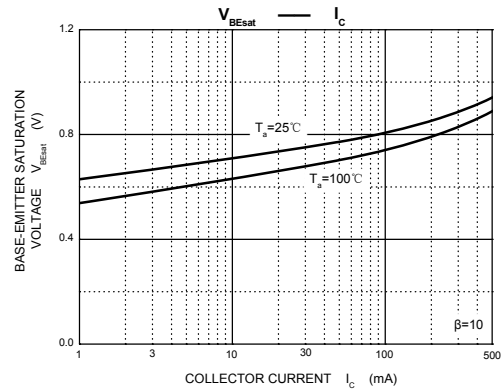
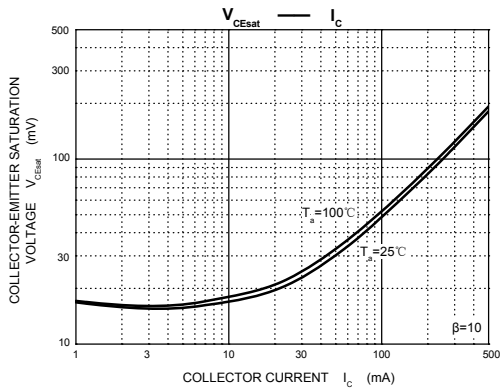
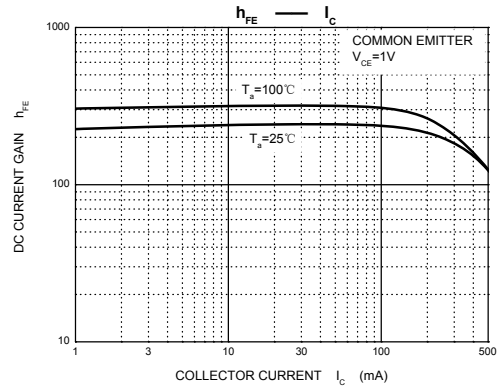
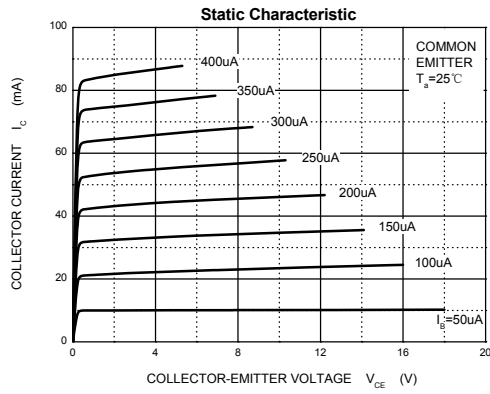
■ Electrical Characteristics  $T_a = 25^\circ C$

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	$\mu A$
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	$h_{FE}$	$V_{CE} = 1 V, I_c = 50 mA$	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  $h_{FE}(1)$

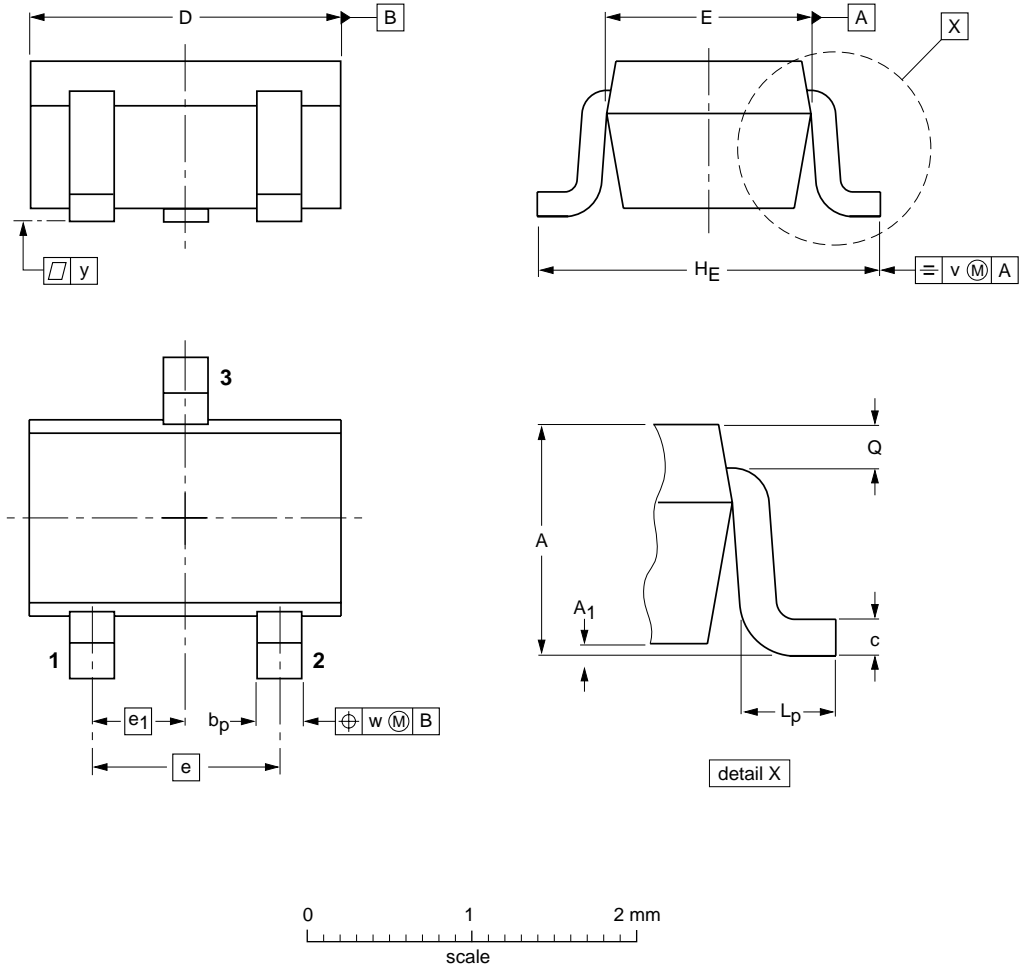
Type	S8050W
Range	200-350
Marking	J3Y

■ Typical Characteristics



Package Outline

SOT-323



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-323	Tape/Reel, 7" reel	3000	EIA-481-1

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