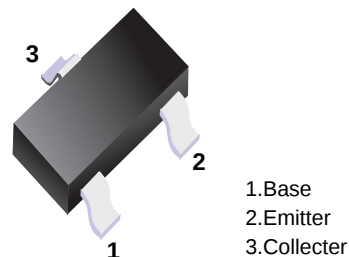


NPN Transistors

■ Features

- Small Package
- Complementary to MMBT2907AT



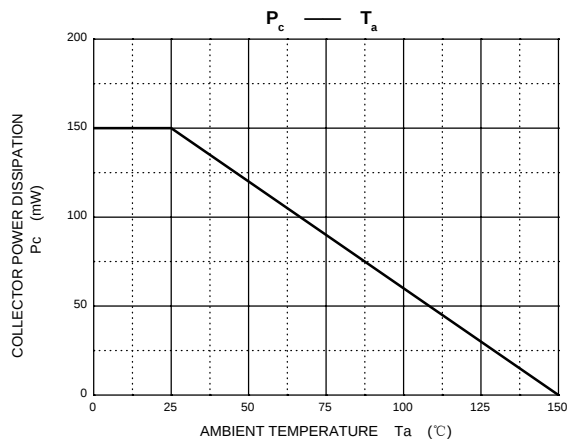
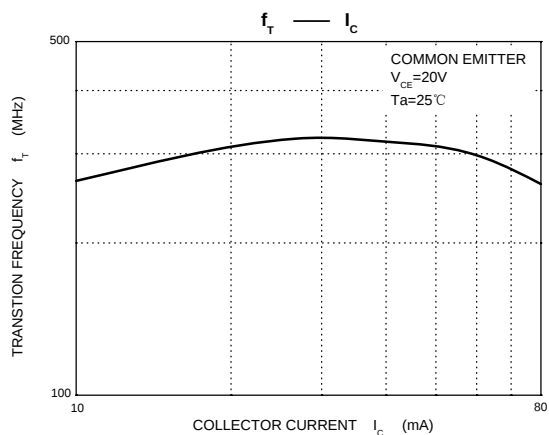
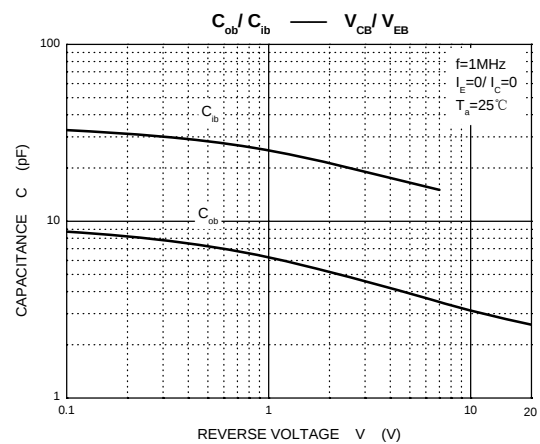
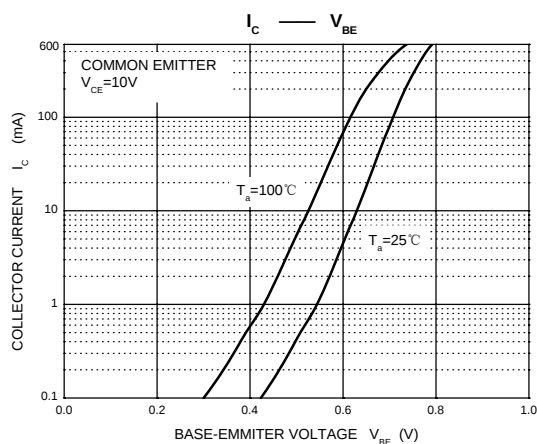
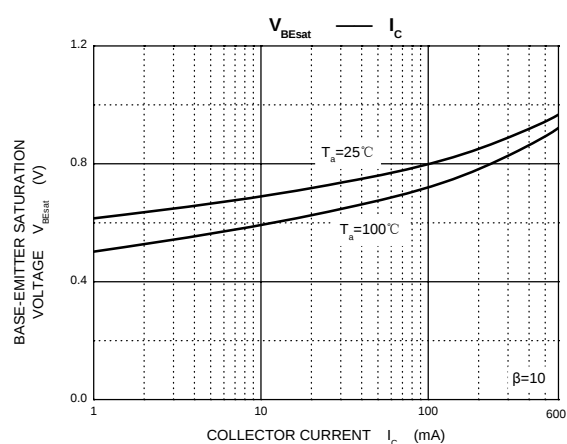
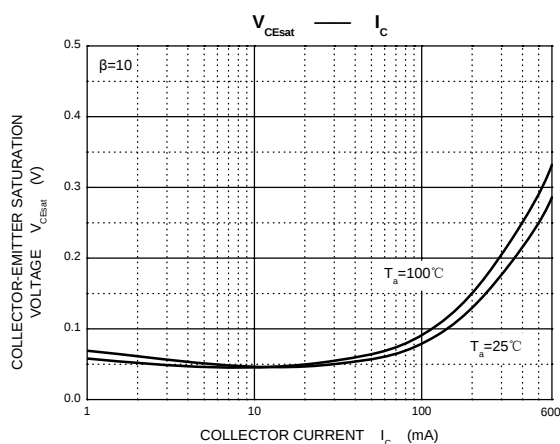
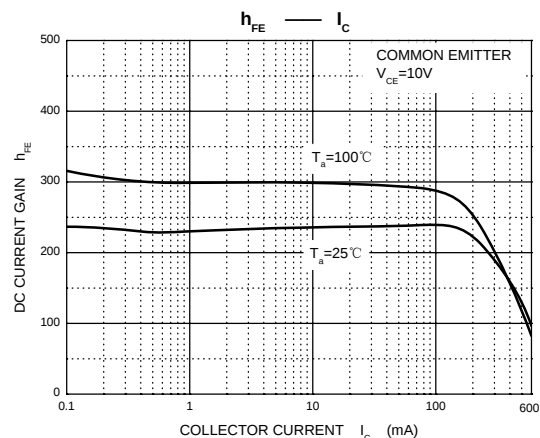
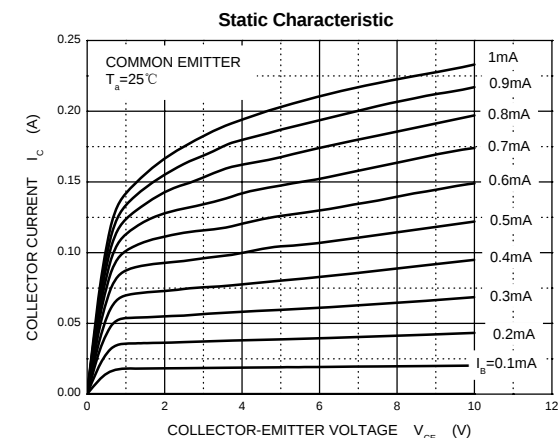
■ Simplified outline(SOT-523)

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

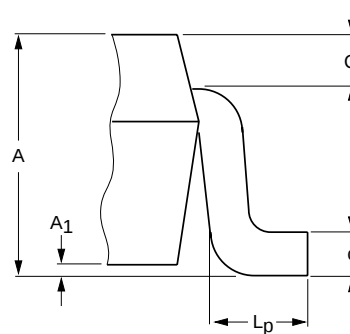
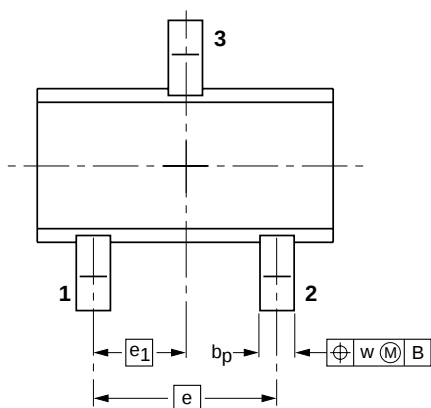
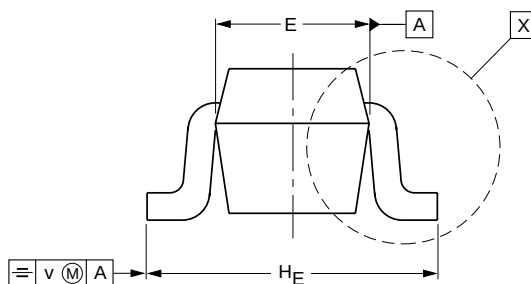
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	75	V
Collector - Emitter Voltage	V_{CE0}	40	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_c	600	mA
Collector Power Dissipation	P_c	150	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

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

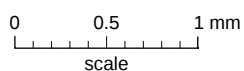
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = 100 \mu\text{A}$, $I_E = 0$	75			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = 10 \text{ mA}$, $I_B = 0$	40			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}$, $I_C = 0$	6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 75 \text{ V}$, $I_E = 0$			100	nA
Collector cut-off current	I_{CEX}	$V_{CE} = 60 \text{ V}$, $V_{EB(off)} = 3\text{V}$			100	
Emitter cut-off current	I_{EBO}	$V_{EB} = 6 \text{ V}$, $I_C = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 150 \text{ mA}$, $I_B = 15 \text{ mA}$			0.3	V
		$I_c = 500 \text{ mA}$, $I_B = 50 \text{ mA}$			1	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 150 \text{ mA}$, $I_B = 15 \text{ mA}$			1.2	
		$I_c = 500 \text{ mA}$, $I_B = 50 \text{ mA}$			2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 10 \text{ V}$, $I_c = 0.1 \text{ mA}$	35			
	$h_{FE(2)}$	$V_{CE} = 10 \text{ V}$, $I_c = 1 \text{ mA}$	50			
	$h_{FE(3)}$	$V_{CE} = 10 \text{ V}$, $I_c = 10 \text{ mA}$	75			
	$h_{FE(4)}$	$V_{CE} = 10 \text{ V}$, $I_c = 150 \text{ mA}$	100		300	
	$h_{FE(5)}$	$V_{CE} = 10 \text{ V}$, $I_c = 500 \text{ mA}$	40			
Delay time	t_d	$V_{CC} = 30 \text{ V}$, $V_{BE(off)} = -0.5 \text{ V}$			10	nS
Rise time	t_r	$I_c = 150 \text{ mA}$, $I_{B1} = 15 \text{ mA}$			25	
Storage time	t_s	$V_{CC} = 30 \text{ V}$, $I_c = 150 \text{ mA}$, $I_{B1} = I_{B2} = 15 \text{ mA}$			225	
Fall time	t_f				60	
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$			8	pF
Transition frequency	f_T	$V_{CE} = 20 \text{ V}$, $I_c = 20 \text{ mA}$, $f = 100 \text{ MHz}$	300			MHz



A diagram of a rectangular box with a dashed vertical center line. A dimension line at the top indicates a length D from the left edge to the right edge. A small rectangular feature is located at the bottom center. A label B is positioned at the top right corner.



detail X



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	0.95 0.60	0.1	0.30 0.15	0.25 0.10	1.8 1.4	0.9 0.7	1	0.5	1.75 1.45	0.45 0.15	0.23 0.13	0.2	0.2