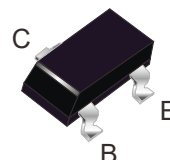


Features

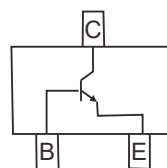
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to MMBT2907AT
- Power Dissipation of 150mW
- High Stability and High Reliability

SOT-523



Mechanical Data

- Case: SOT-523
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: 1P



Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

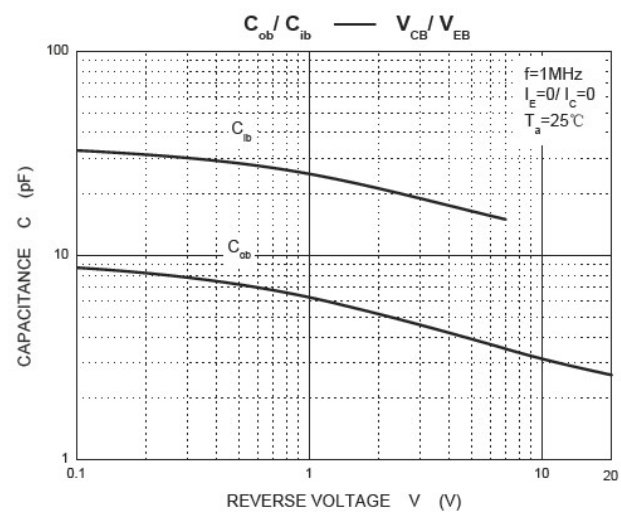
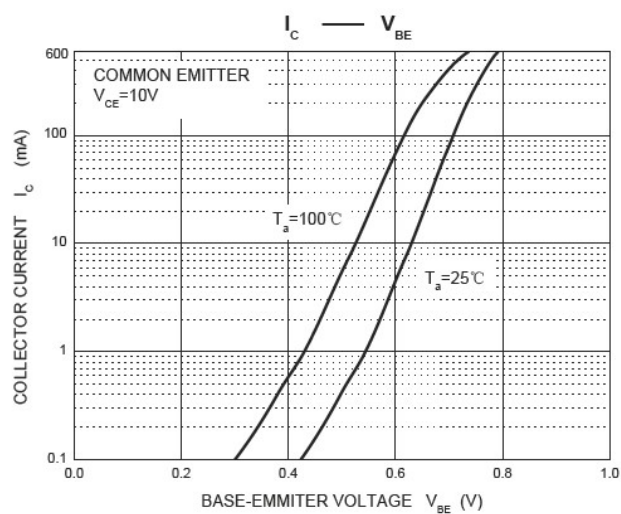
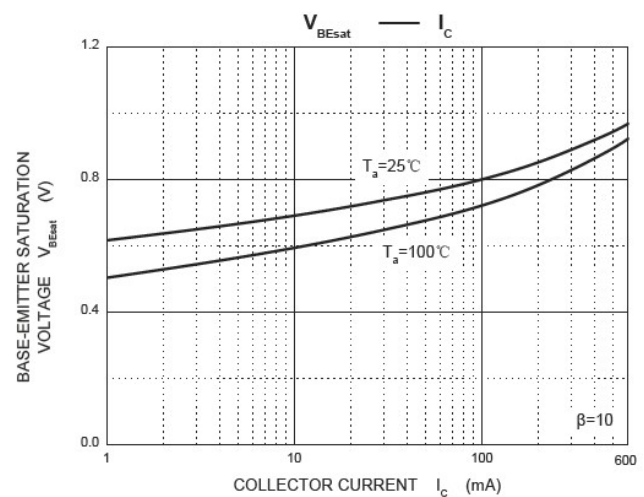
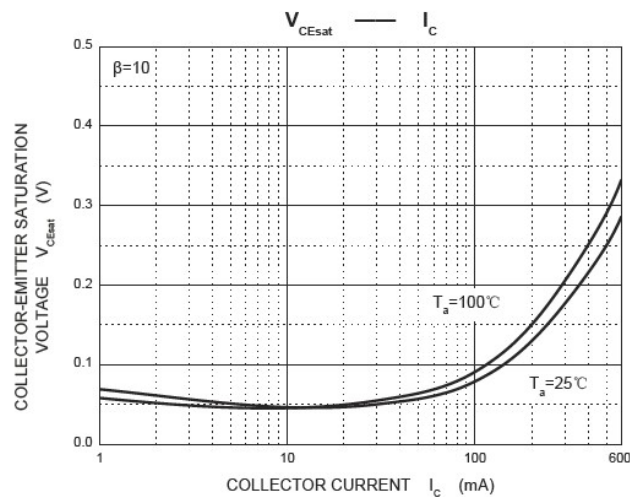
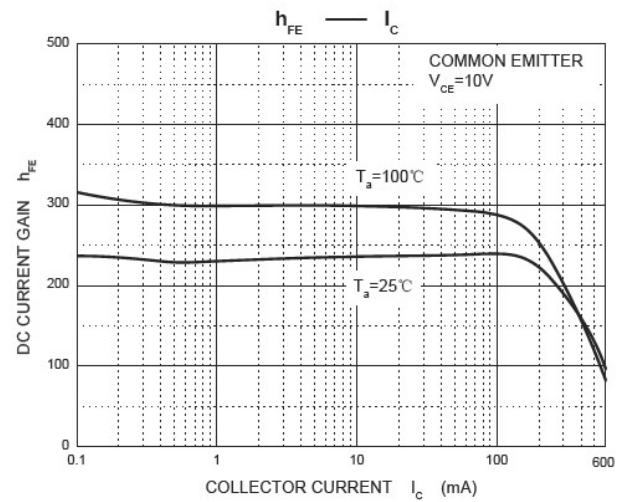
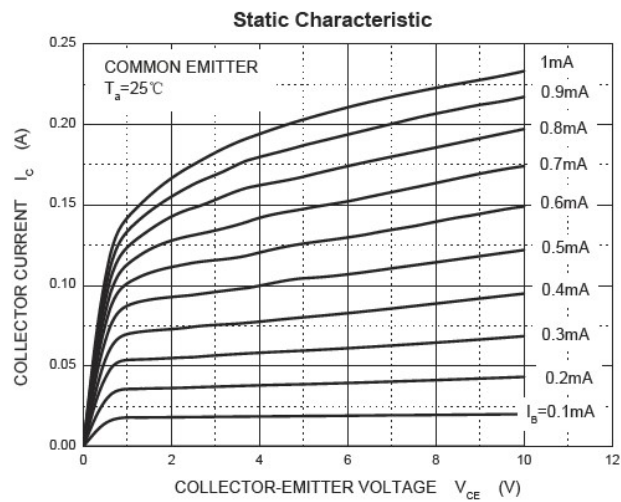
Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	40
Collector-Base Voltage	V_{CBO}	V	75
Emitter-Base Voltage	V_{EBO}	V	6.0
Collector Current, Continuous	I_C	mA	600
Power Dissipation	P_D	mW	150
Operation Junction Temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	833

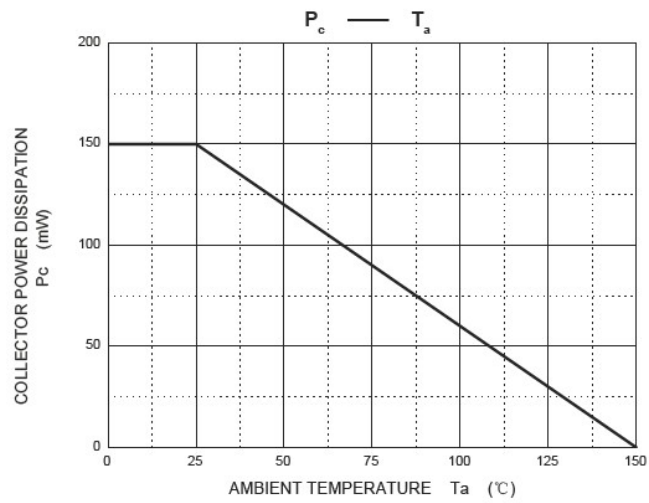
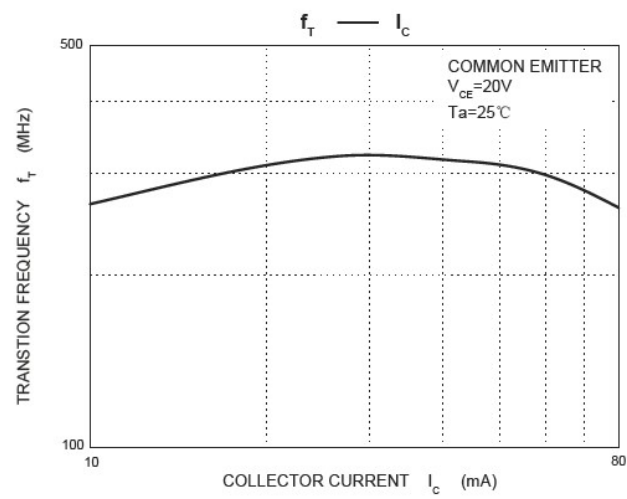
Electrical Characteristics($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	$I_C=10\text{mA}, I_B=0$	40	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=10\mu\text{A}, I_E=0$	75	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	$I_E=10\mu\text{A}, I_C=0$	6.0	---
Collector cut-off Current	I_{CEX}	nA	$V_{CE}=60\text{V}, V_{EB(off)}=3\text{V}$	---	10
DC Current Gain	$h_{FE(1)}$		$I_C=0.1\text{mA}, V_{CE}=10\text{V}$	35	---
	$h_{FE(2)}$		$I_C=1\text{mA}, V_{CE}=10\text{V}$	50	---
	$h_{FE(3)}$		$I_C=10\text{mA}, V_{CE}=10\text{V}$	75	---
	$h_{FE(4)}$		$I_C=150\text{mA}, V_{CE}=10\text{V}$	100	300
	$h_{FE(5)}$		$I_C=500\text{mA}, V_{CE}=10\text{V}$	40	---
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=150\text{mA}, I_B=15\text{mA}$	---	0.30
			$I_C=500\text{mA}, I_B=50\text{mA}$	---	1.00
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=150\text{mA}, I_B=15\text{mA}$	---	1.20
			$I_C=500\text{mA}, I_B=50\text{mA}$	---	2.00
Current Gain-Bandwidth Product	f_T	MHz	$I_C=20\text{mA}, V_{CE}=20\text{V}$ $f=100\text{MHz}$	300	---
Output Capacitance	C_{ob}	pF	$V_{CB}=10\text{V}, f=1.0\text{MHz}, I_E=0$	---	8
Delay time	t_d	nS	$V_{CC}=30\text{V}, V_{BE(off)}=-0.5\text{V},$ $I_C=150\text{mA}, I_{B1}=15\text{mA}$	---	10
Rise time	t_r	nS		---	25
Storage time	t_s	nS	$V_{CC}=30\text{V}, I_C=150\text{mA},$ $I_{B1}=I_{B2}=15\text{mA}$	---	225
Fall time	t_f	nS		---	60

Pulse test:pulse width $\leq 300\mu\text{s}$,duty cycle $\leq 2.0\%$

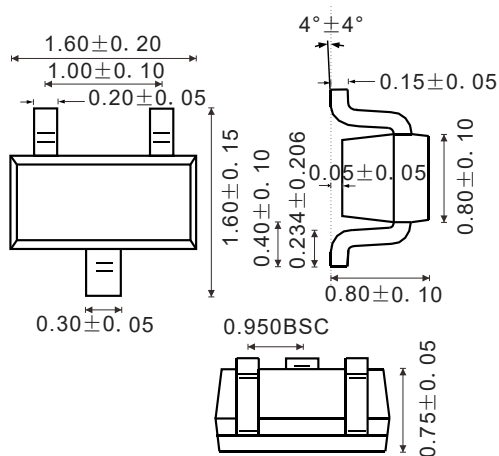
Characteristics(Typical)





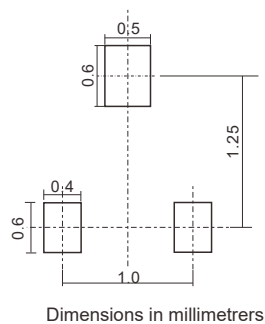
Outline Dimensions

SOT-523



Dimensions in inches and (millimeters)

Suggested pad layout



Friendship Reminder

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