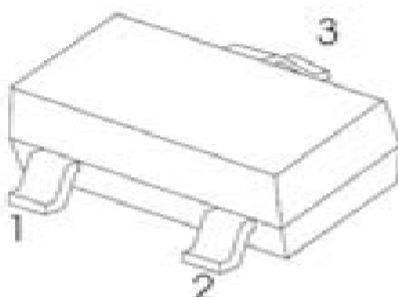


FEATURES

- High Collector Current.
- Complementary to S9012.
- Excellent h_{FE} Linearity.



1. BASE
2. EMITTER
3. COLLECTOR

SOT-23

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	416	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

SOT-23 Plastic-Encapsulate Transistors

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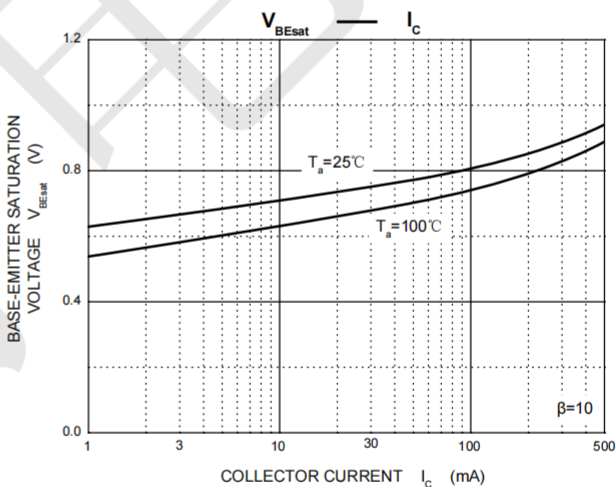
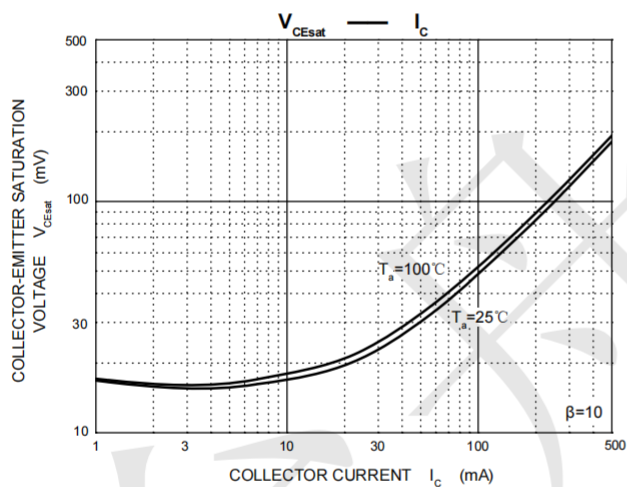
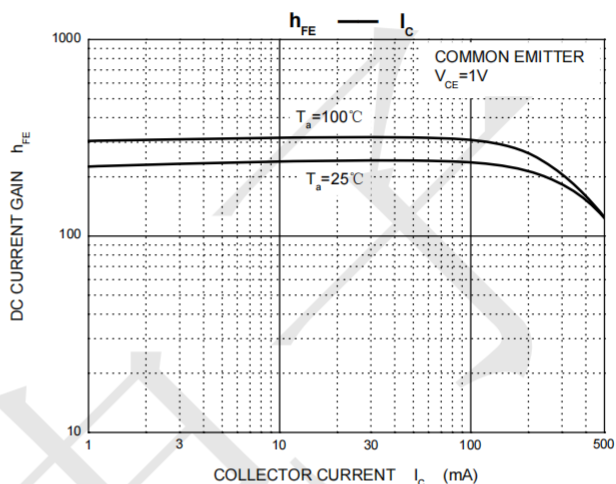
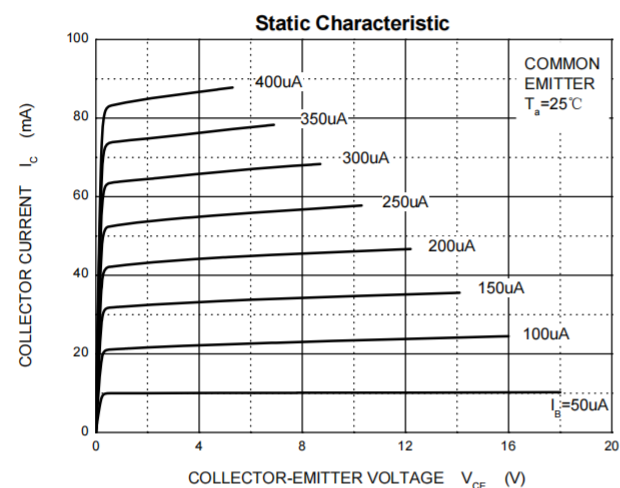
ELECTRICAL CHARACTERISTICS ($T_a=25$ unless otherwise specified)

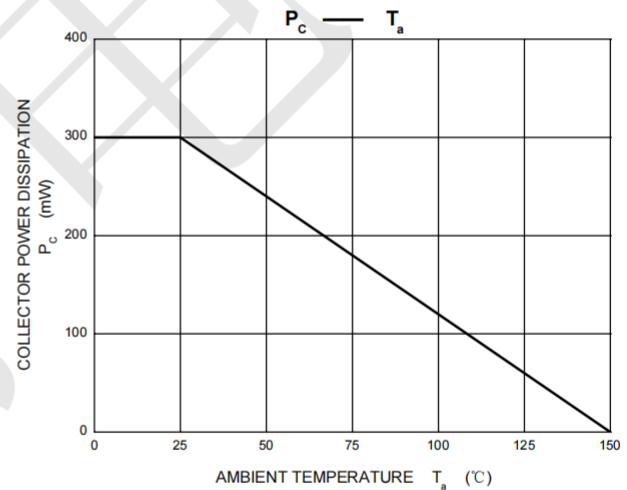
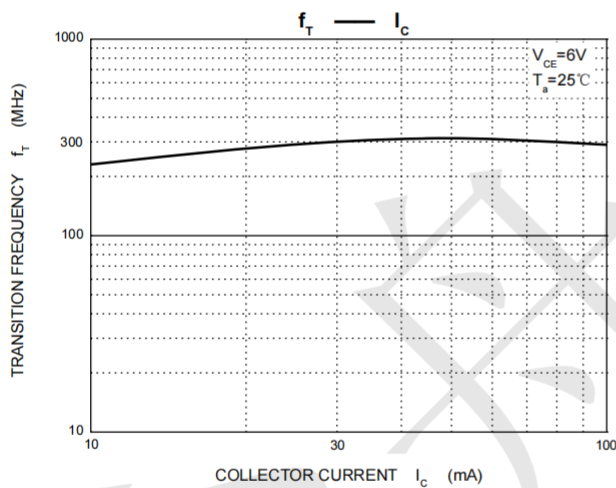
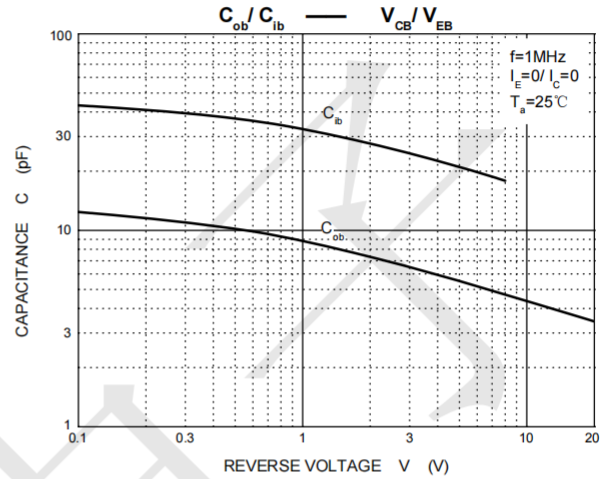
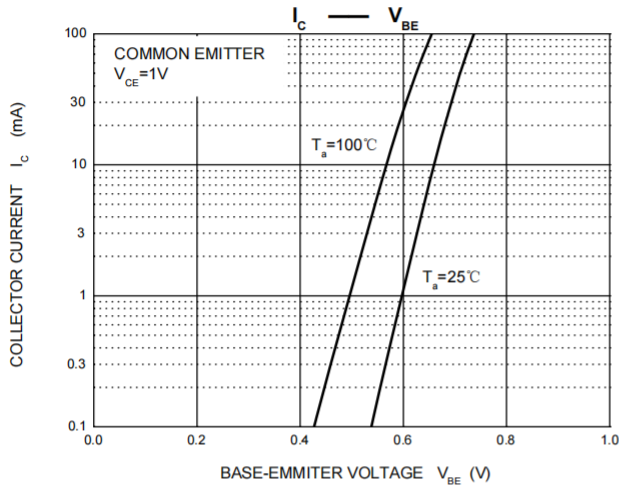
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.1mA, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=40V, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=20V, I_B=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=50mA$	120		400	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=500mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Base-emitter voltage	V_{BE}	$V_{CB}=1V, I_C=10mA$			0.7	V
Transition frequency	f_T	$V_{CE}=6V, I_C=20mA, f=30MHz$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=6V, I_E=0, f=1MHz$			8	pF

CLASSIFICATION OF $h_{FE(1)}$

RANK	L	H	J
RANGE	120-200	200-350	300-400

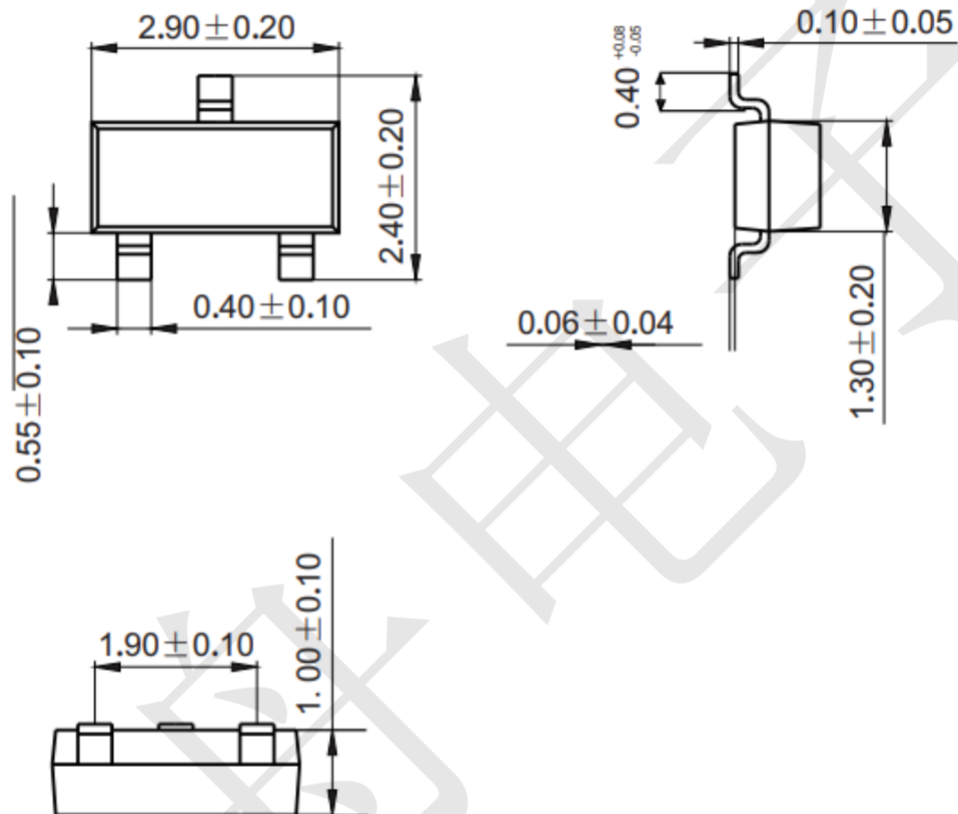
Typical Characteristics





Package information (Unit: mm)

SOT-23



Mounting Pad Layout (Unit: mm)

