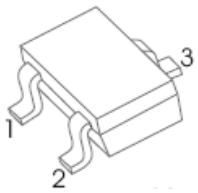
SOT-323 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

SOT－323



1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

- High Collector Current
- Excellent H_{FE} Linearity Marking:J3

MAXIMUM RATINGS (T_a=25℃ 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	200	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

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=100μA, 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=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=40V, I_E=0			100	nA
Collector cut-off current	I_{CEO}	V_{CE}=20V, I_B=0			100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			100	nA
DC current gain	h_{FE}	V_{CE}=1V, I_C=50mA	120		400	
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_{CE}=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}

RANK	L	H	J
RANGE	120－200	200－350	300－400
MARKING	J3		

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Typical Characteristics

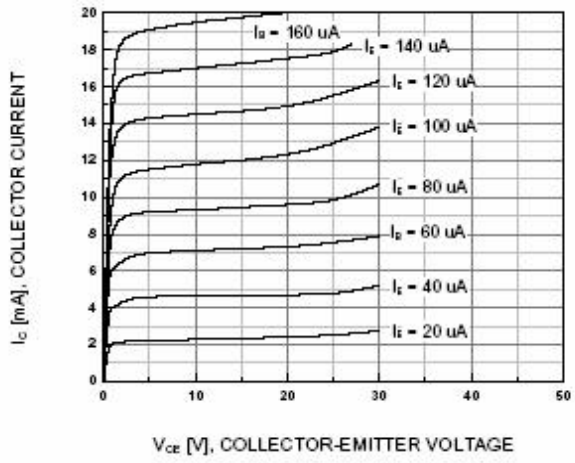


Figure 1. Static Characteristic

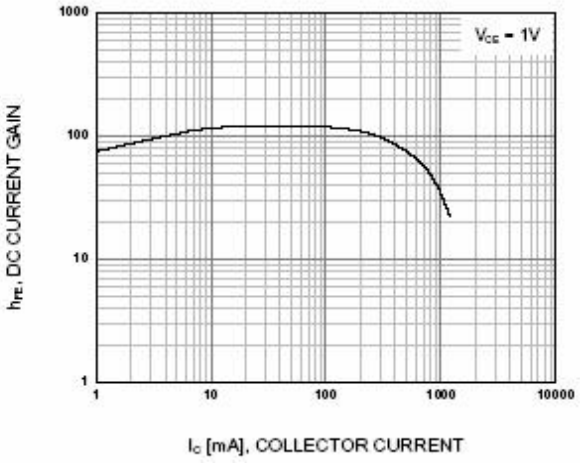


Figure 2. DC current Gain

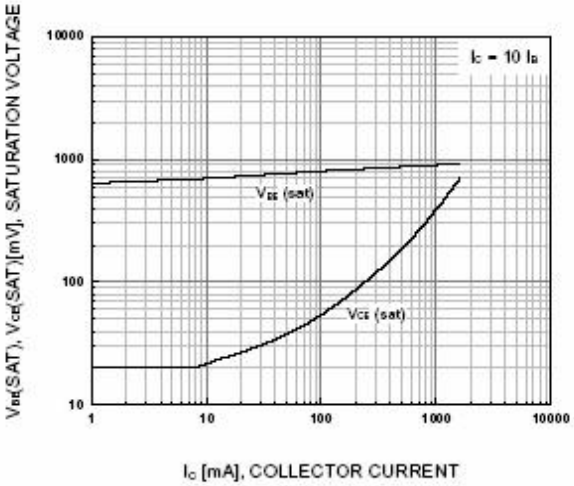


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

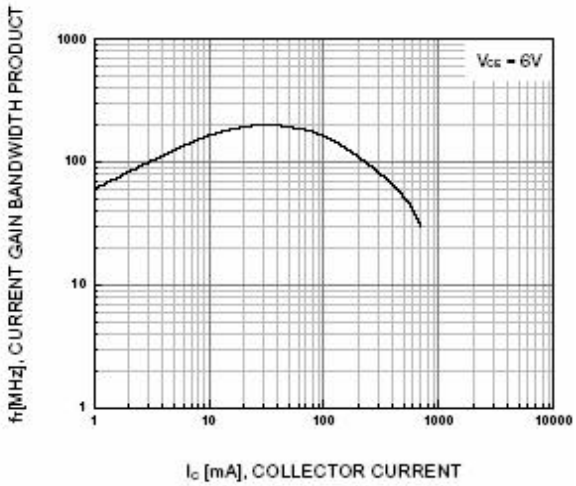


Figure 4. Current Gain Bandwidth Product

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