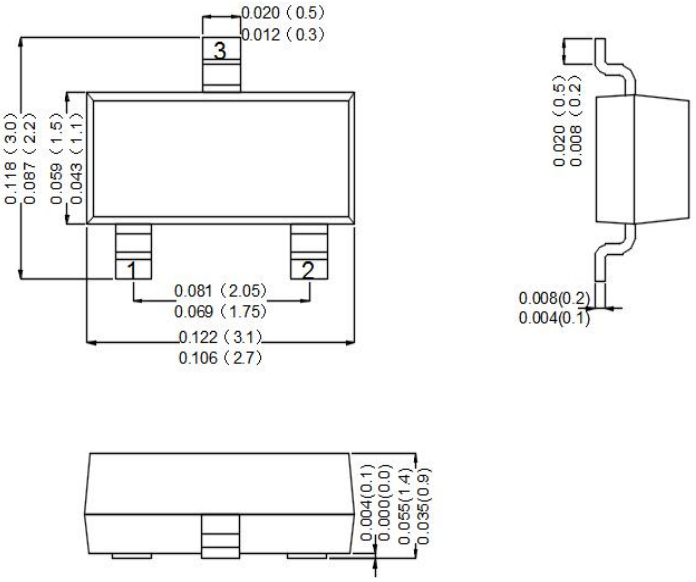
S9014

General Purpose NPN Transistor

Features

SOT-23

• Complementary to S9015



Dimensions in inches and (millimeters)

Mechanical Data

• Case:Molded Plastic,SOT-23
• Epoxy:UL 94V-0 rate flame retardant
• Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026.
• Marking: J6
• Mounting Position : Any.
• Equivalent Circuit:

Maximum Ratings Maximum Ratings (Rating at 25℃ ambient temperature unless otherwise specified.)

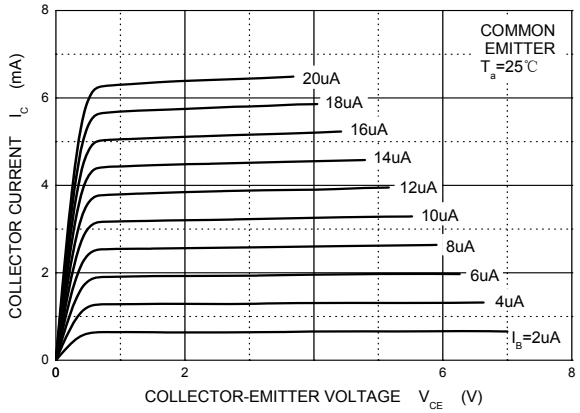
Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	0.1	mA
Collector Power Dissipation	P_C	0.2	mW
Junction Temp erature	T_j	150	℃
Storage Temperature	T_{stg}	-55 to + 150	℃

Electrical Characteristics (Rating at 25℃ ambient temperature unless otherwise specified.)

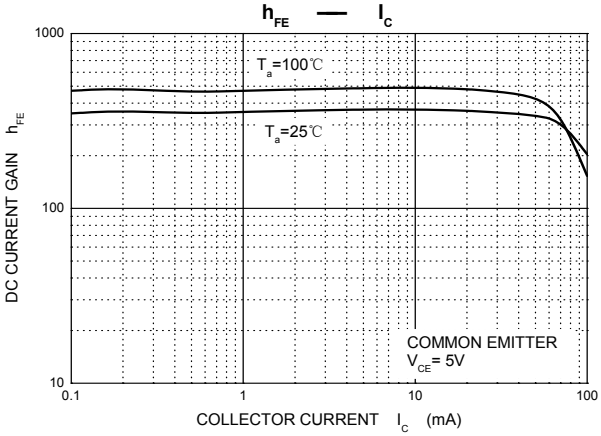
Parameter	Symbol	Test conditions	MIN	TYP	MAX	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100μA, I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 0.1mA, I_B=0	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_C= 100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=35V, I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=3V, I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=5V, I_C=1mA	200		1000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C= 100mA, I_B=5mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= 100mA, I_B=5mA			1	V
Transition frequency	f_T	VCE=5V, I_C= 10mA f=30MHz	150			MHz

Rating And Characteristic Curves

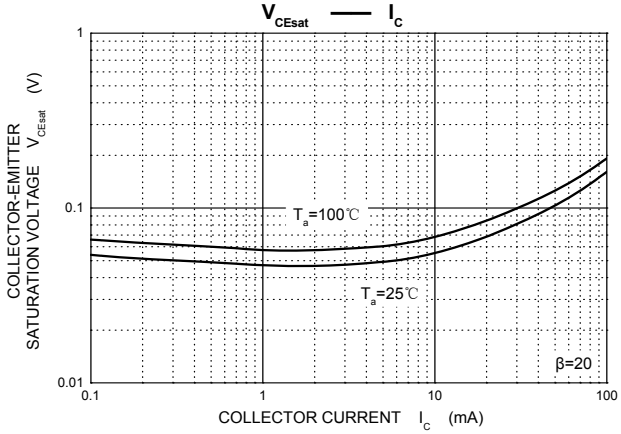
Static Characteristic



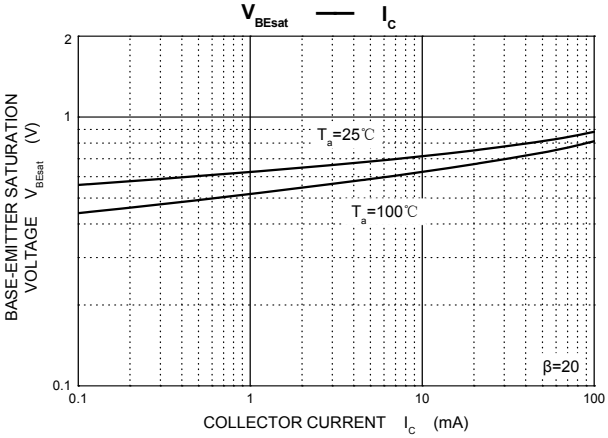
h_{FE} — I_C



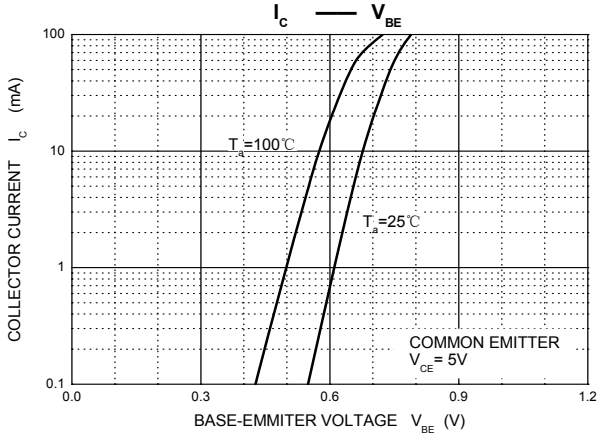
V_{CEsat} — I_C



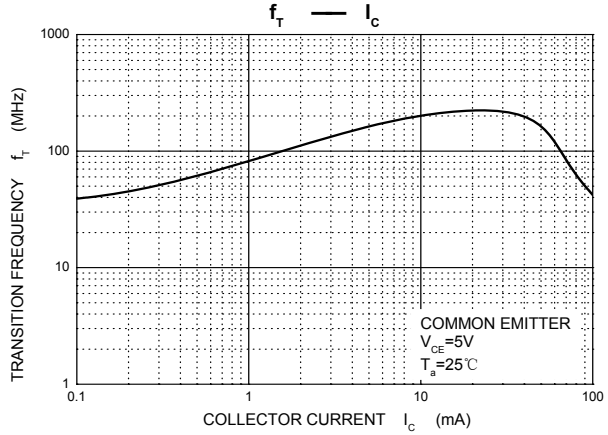
V_{BEsat} — I_C



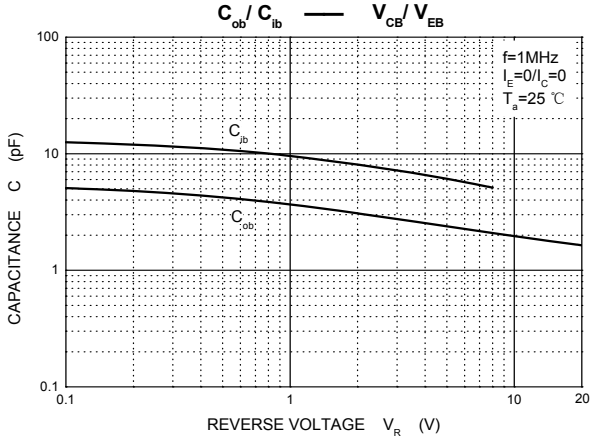
I_C — V_{BE}



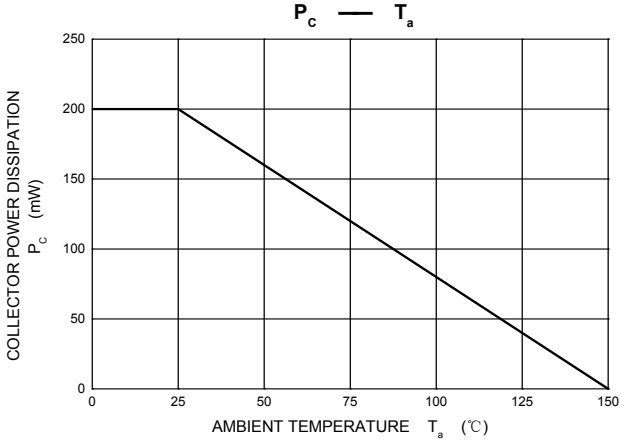
f_T — I_C



C_{ob}/ C_{ib} — V_{CB}/ V_{EB}



P_C — T_a



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