

PNP Transistors

2SB1571-HF

Features

- Low collector-emitter saturation voltage
- Complementary to 2SD2402-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish

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

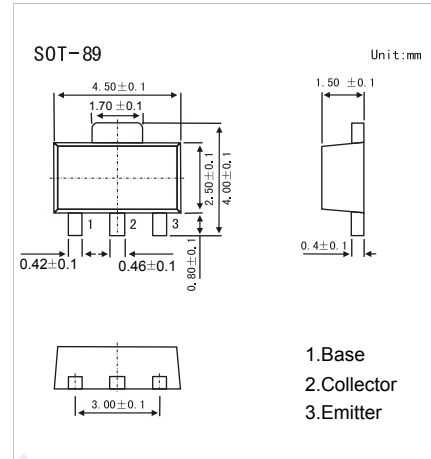
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-50	V
Collector - Emitter Voltage	V_{CE0}	-30	
Emitter - Base Voltage	V_{EB0}	-6	
Collector Current - Continuous	I_C	-5	A
Collector Current - Pulse	I_{CP}	-8	
Collector Power Dissipation	P_C	2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
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}	$I_C = -100\ \mu\text{A}, I_E = 0$	-50			V
Collector-emitter breakdown voltage	V_{CE0}	$I_C = -1\ \text{mA}, I_B = 0$	-30			
Emitter-base breakdown voltage	V_{EB0}	$I_E = -100\ \mu\text{A}, I_C = 0$	-6			
Collector-base cut-off current	I_{CB0}	$V_{CB} = -50\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = -6\text{V}, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3\ \text{A}, I_B = -150\ \text{mA}$		-0.17	-0.35	V
		$I_C = -5\ \text{A}, I_B = -250\ \text{mA}$		-0.28	-0.55	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -3\ \text{A}, I_B = -150\ \text{mA}$		-0.89	-1.2	
Base-emitter voltage	V_{BE}	$V_{CE} = -1\text{V}, I_C = -100\ \text{mA}$	-0.6		-0.7	
DC current gain	h_{FE}	$V_{CE} = -1\text{V}, I_C = -1\ \text{A}$	80			
		$V_{CE} = -1\text{V}, I_C = -2\ \text{A}$	100	200	400	
Turn-on Time	t_{on}	$I_C = -2.0\ \text{A}, V_{CC} = -10\ \text{V}, R_L = 5.0\ \Omega, I_{B1} = -I_{B2} = -0.1\ \text{A},$		265		ns
Storage Time	t_{stg}			350		
Fall Time	t_f				50	
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		100		pF
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_E = 500\ \text{mA}$		150		MHz

Classification of $h_{FE}(2)$

Type	2SB1571-X-HF	2SB1571-Y-HF	2SB1571-Z-HF
Range	100-200	160-320	200-400
Marking	HX _F	HY _F	HZ _F

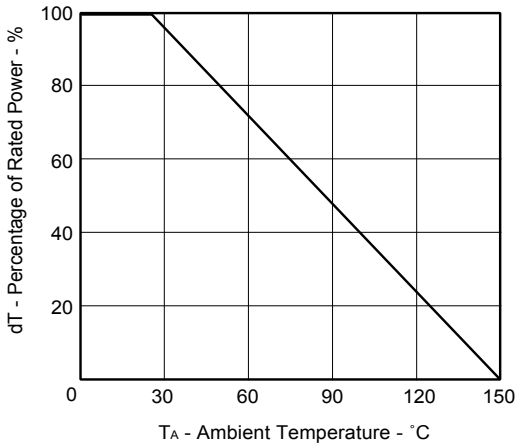


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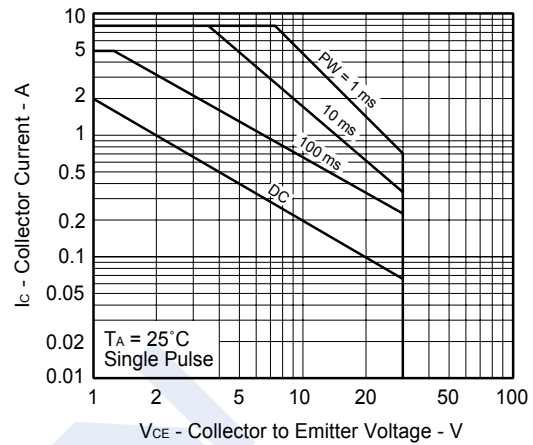
2SB1571-HF

Typical Characteristics

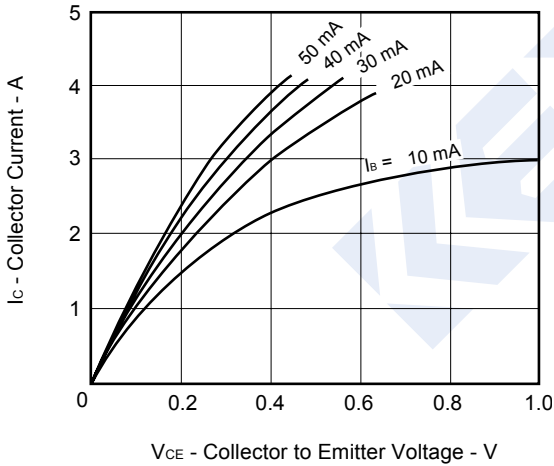
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



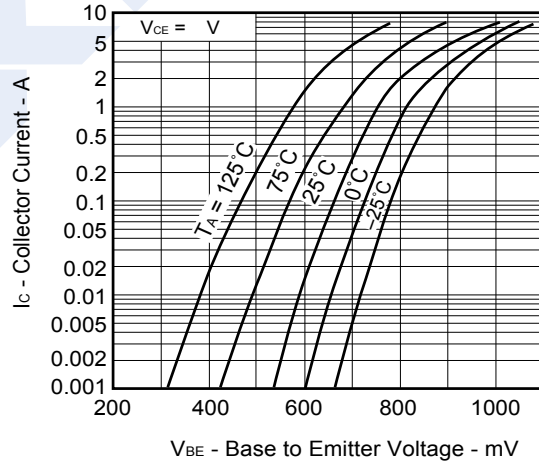
FORWARD BIAS SAFE OPERATING AREA



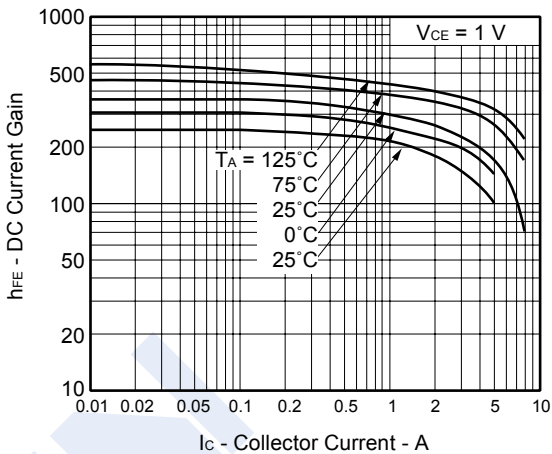
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



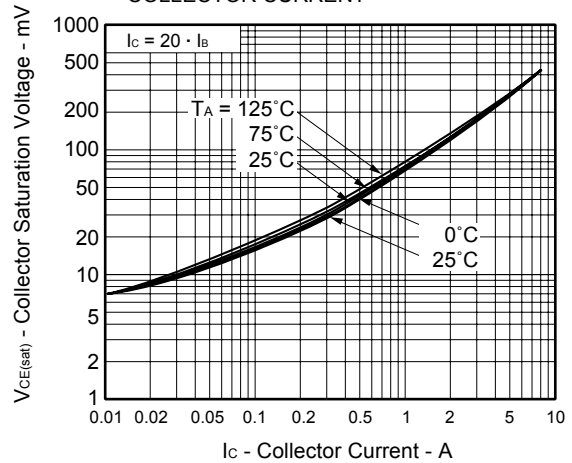
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT

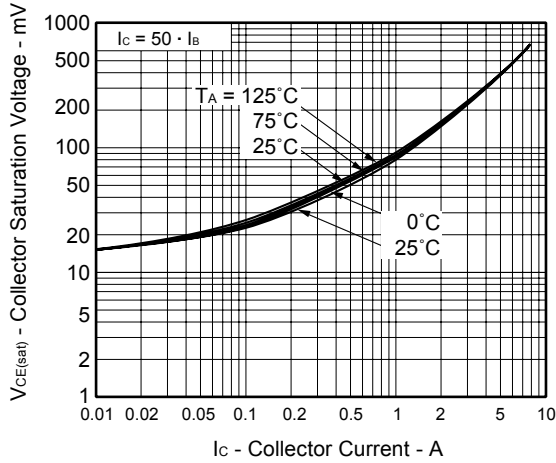


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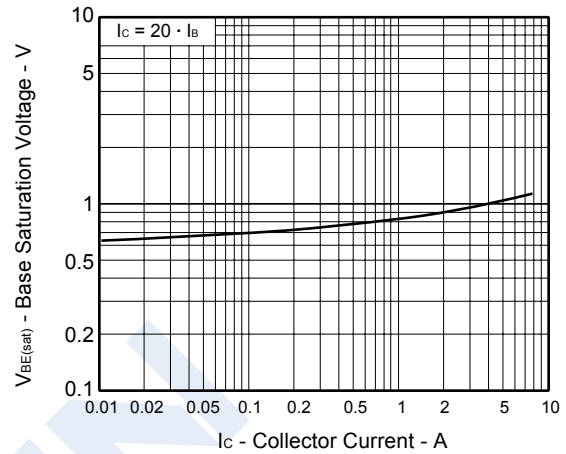
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Typical Characteristics

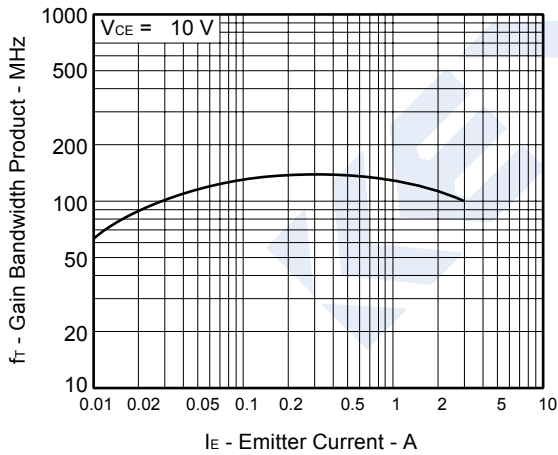
COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



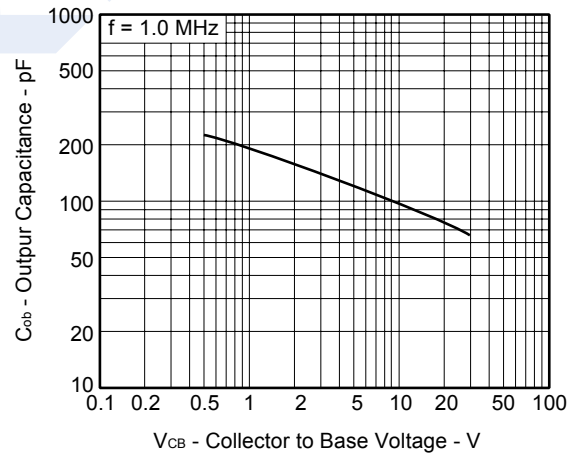
BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



SWITCHING CHARACTERISTICS

