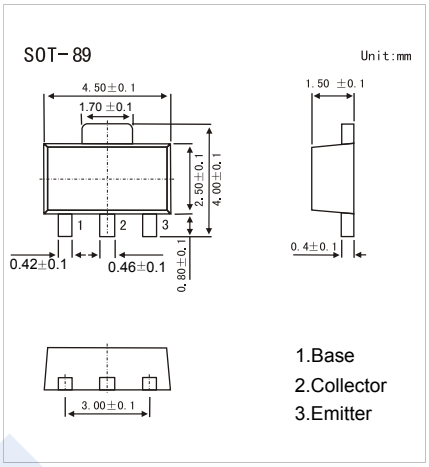
PNP Transistors

2SB1628



■ Features

- High current capacitance
- Low collector saturation voltage

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-20	V
Collector - Emitter Voltage	V_{CEO}	-16	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-3	A
Collector Current - Pulse	I_{CP}	-5	
Collector Power Dissipation	P_C	2	W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA, I_E=0	-20			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, I_B=0	-16			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-6			
Collector-base cut-off current	I_{CBO}	V_{CB}= -20 V , I_E=0			-100	nA
Emitter cut-off current	I_{EBO}	V_{EB}= -6V , I_C=0			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-2 A, I_B=-100mA			-0.35	V
		I_C=-3 A, I_B=-150mA			-0.55	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-2 A, I_B=-100mA			-1.2	
Base - emitter voltage	V_{BE}	V_{CE}= -2V, I_C= -50mA	-0.6		-0.7	
DC current gain	$h_{FE(1)}$	V_{CE}= -2V, I_C= -500mA	140		560	
	$h_{FE(2)}$	V_{CE}=- 2V, I_C= -3 A	70			
Turn-on time	t_{on}	I_C = −1.0 A, V_{CC} = −10 V I_{B1} = −I_{B2} = −0.1 A R_L = 10 Ω		70		ns
Storage time	t_{stg}			110		
Fall time	t_f			40		
Collector output capacitance	C_{ob}	V_{CB}= -10V, I_E= 0,f=1MHz		45		pF
Transition frequency	f_T	V_{CE}= -3V, I_E= 500mA		320		MHz

■ Classification of $h_{fe(1)}$

Type	2SB1628-X	2SB1628-Y	2SB1628-Z
Range	140-280	200-400	280-560
Marking	ZX	ZY	ZZ

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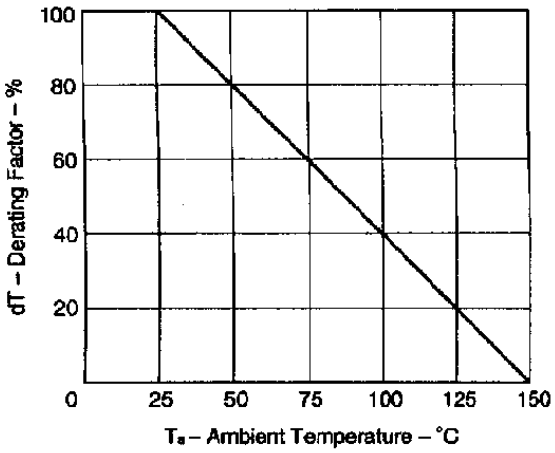
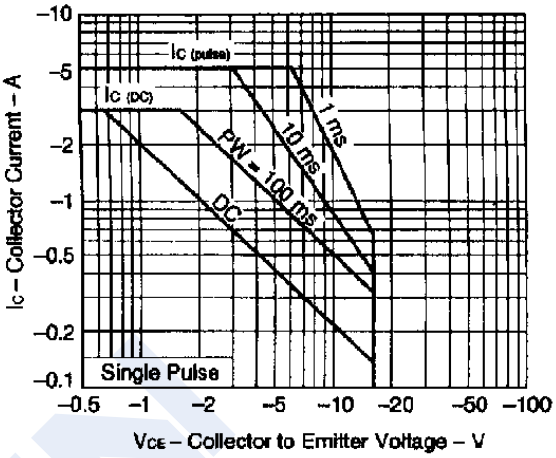
■ Typical Characterisitics

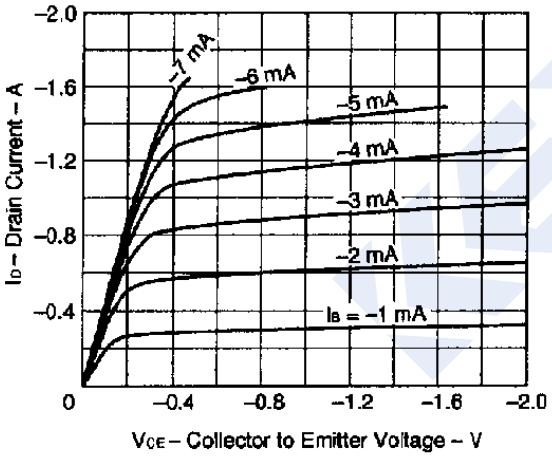
DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



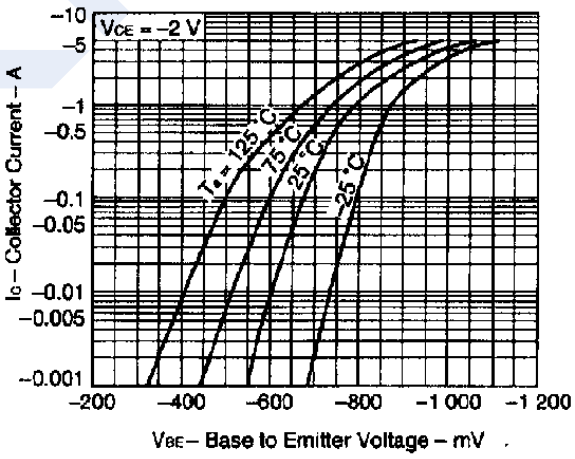
FORWARD BIAS SAFE OPERATING AREA



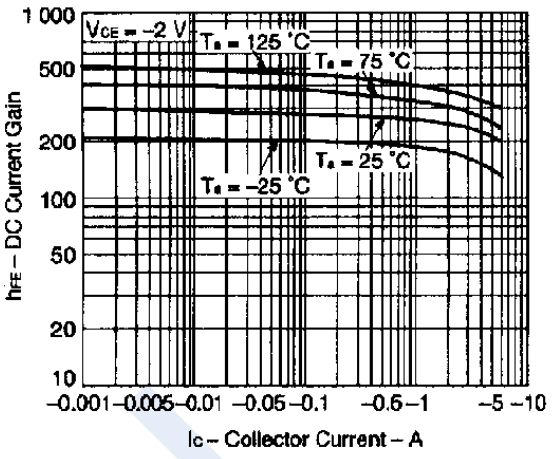
DRAIN CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



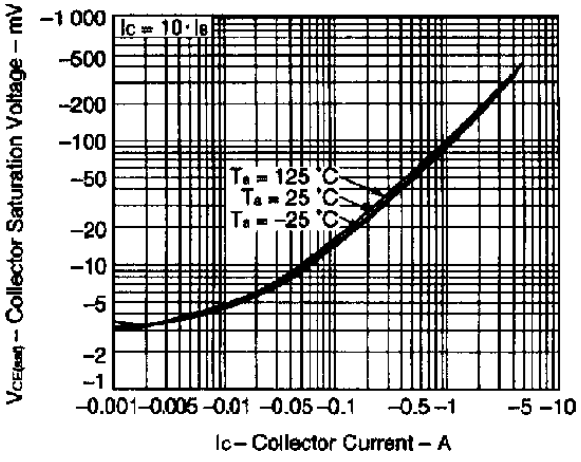
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



PNP Transistors

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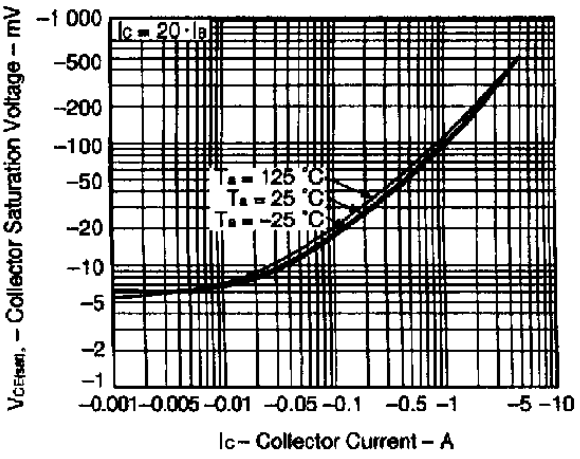
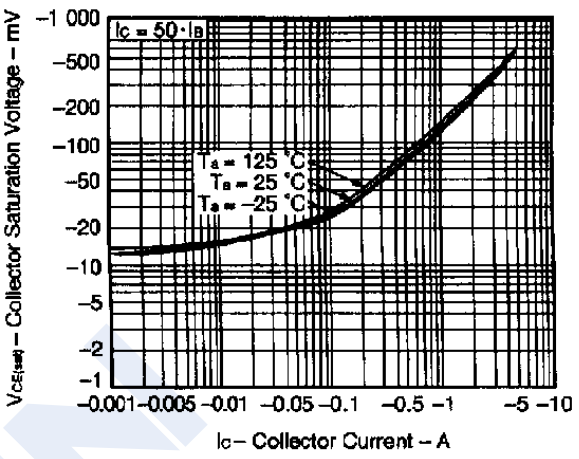
■ Typical Characterisitics

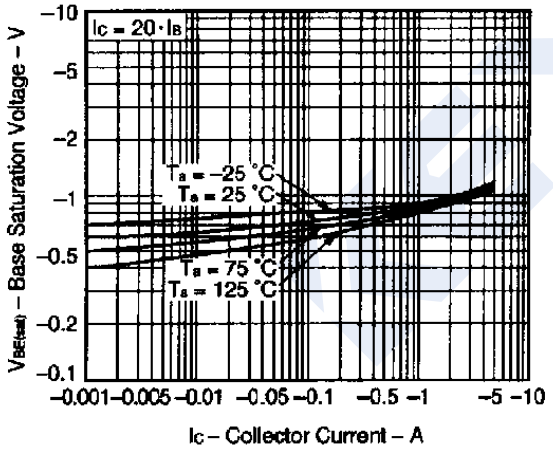
COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



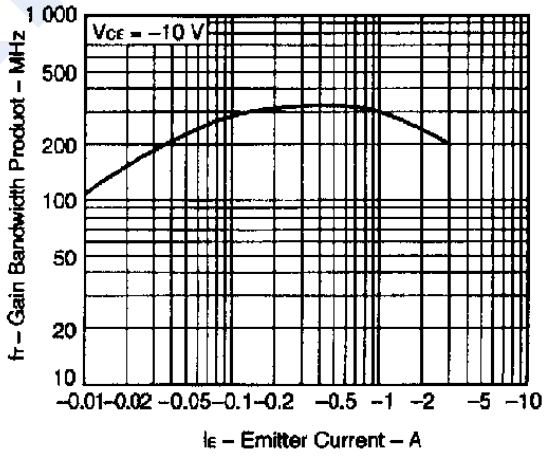
COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



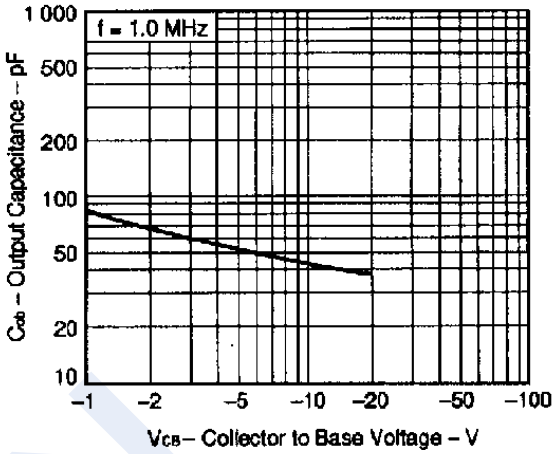
BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



SWITCHING TIME vs. COLLECTOR CURRENT