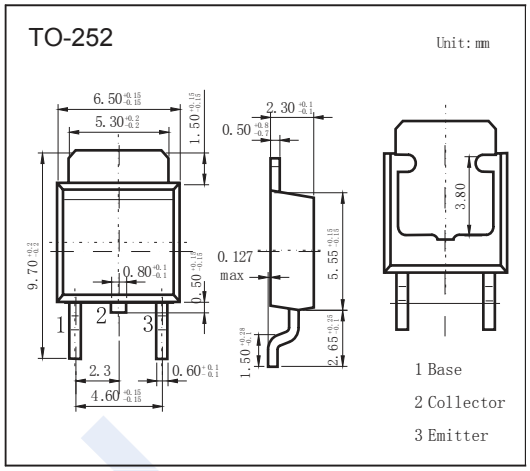
PNP Transistors

2SB962-Z



■ Features

● Low collector to emitter saturation voltage $V_{CE(sat)}$.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-40	V
Collector - Emitter Voltage	V_{CEO}	-30	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-3	A
Collector current -Pulse	I_{CP}	-6	
Collector Power Dissipation (Note.1)	P_C	2	W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

Note.1: PW ⩽ 10ms,Duty Cycle ⩽ 50%

■ 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	-40			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, I_B=0	-30			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -30V , I_E=0			-10	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -4V , I_C=0			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-2 A, I_B=-200mA (Note.1)		-0.3	-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	IC=-2 A, IB=-200mA (Note.1)		-1	-2	
DC current gain	$h_{FE(1)}$	V_{CE}= -2V, I_C= -20mA (Note.1)	30	150		
	$h_{FE(2)}$	V_{CE}= -2V, I_C= -1 A (Note.1)	60	160	400	
Collector output capacitance	C_{ob}	V_{CB} = –10V, I_E = 0, f = 1MHz		55		pF
Transition frequency	f_T	V_{CE}= -5V, I_E= 100mA		80		MHz

Note.1: Pulsed: PW ⩽ 350us,Duty Cycle⩽ 2%

■ Classification of $h_{fe(2)}$

Type	2SB962-Z-R	2SB962-Z-Q	2SB962-Z-P	2SB962-Z-E
Range	60-120	100-200	160-320	200-400

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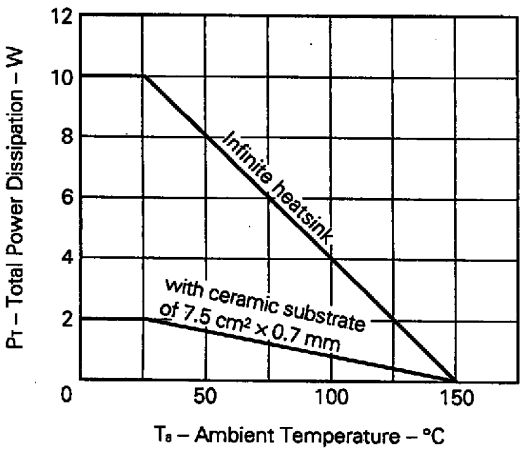
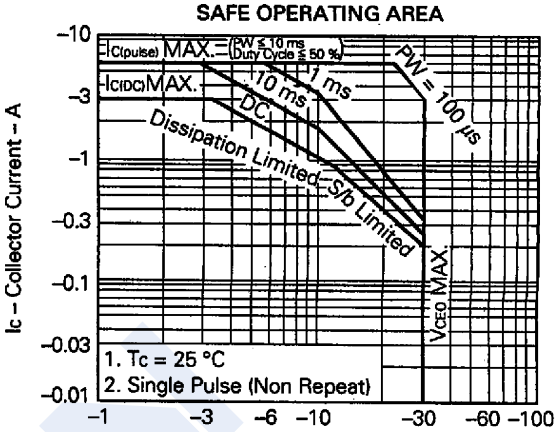
■ Typical Characterisitics

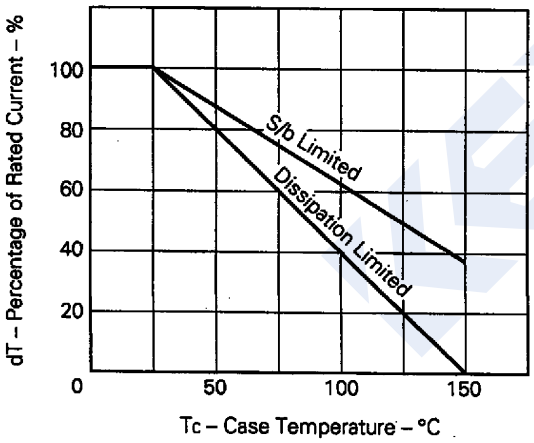
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



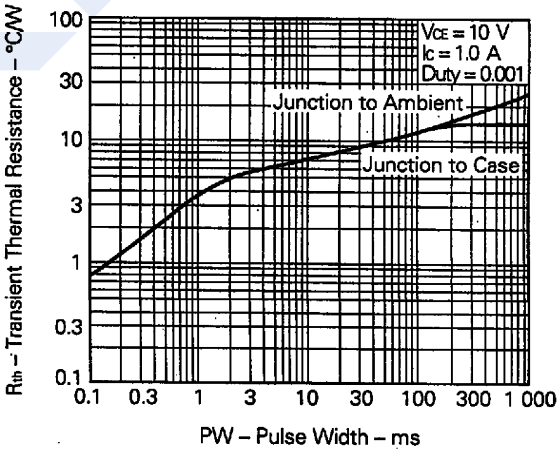
SAFE OPERATING AREA



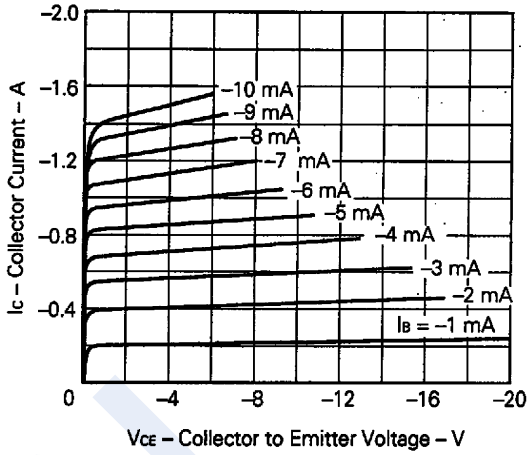
DERATING CURVE OF SAFE OPERATING AREA



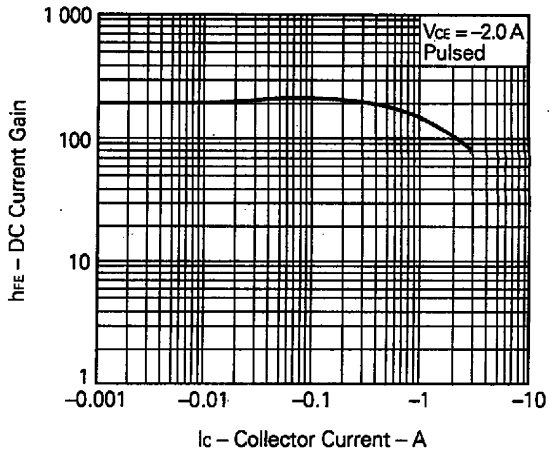
TRANSIENT THERMAL RESISTANCE



COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



PNP Transistors

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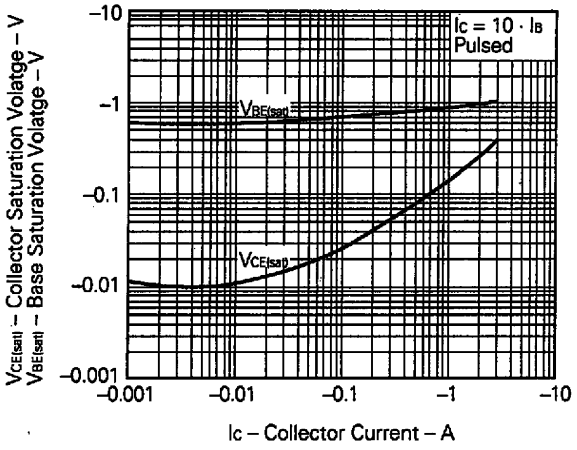
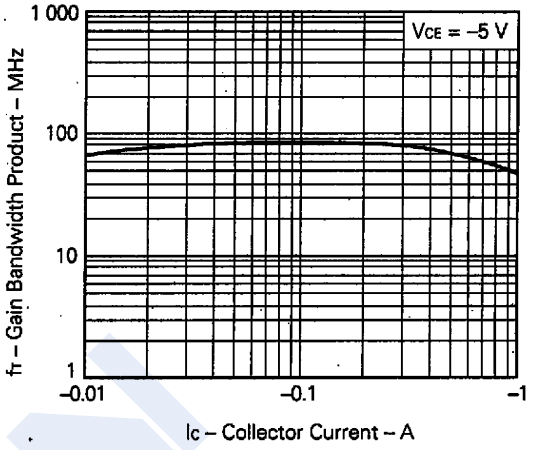
■ Typical Characterisitics

BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



OUTPUT CAPACITANCE vs. COLLECTOR TO BASE VOLTAGE