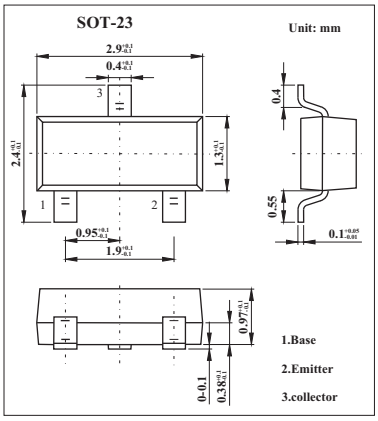
TY Semicondutor®

Product specification

2SC945



■ Features

- Collector current up to 150mA
- High h_{FE} linearity

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	60	V
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	5	V
Collector current (DC)	I_C	150	mA
power dissipation	P_C	200	mW
Junction temperature	T_j	150	℃
Storage temperature range	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100 μA, I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA , I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100 μA, I_C=0	5			V
Collector cutoff current	I_{CBO}	V_{CB} = 60V, I_E = 0			0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 5.0 V, I_C = 0			0.1	μA
DC current gain	h_{FE}	V_{CE} = 6.0V, I_C =1.0mA	130		400	
		V_{CE} = 6.0V, I_C =0.1mA	40			
Collector saturation voltage	$V_{CE(sat)}$	I_C=100mA,I_B=10mA			0.3	V
Base saturation voltage	$V_{BE(sat)}$	I_C=100mA,I_B=10mA			1.0	V
Collector to base capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0 , f = 1 MHz			3.0	pF
Noise figure	NF	V_{CE}=6V,I_C=0.1mA,R_g=10kΩ,f=1kMHZ		4	10	dB
Transition frequency	f_T	V_{CE}=6V,I_C=10mA,f =30 MHz	150			MHz

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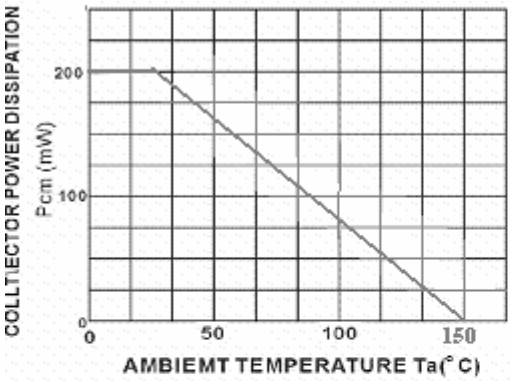
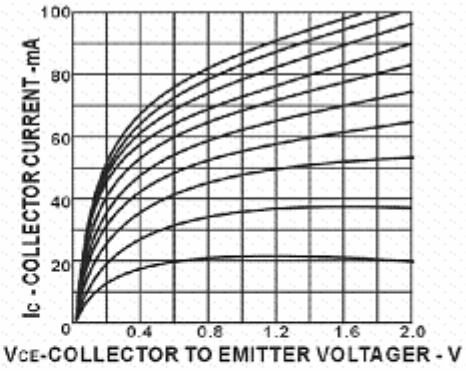
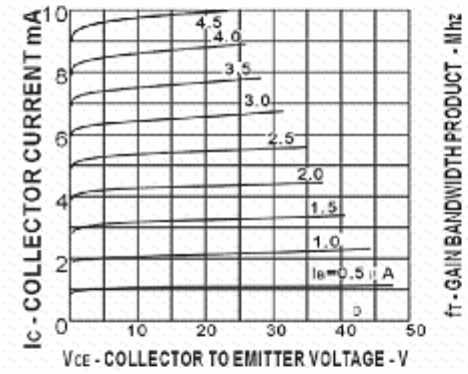
TOTAL Power Dissipation
vs AMBIENT Temperature



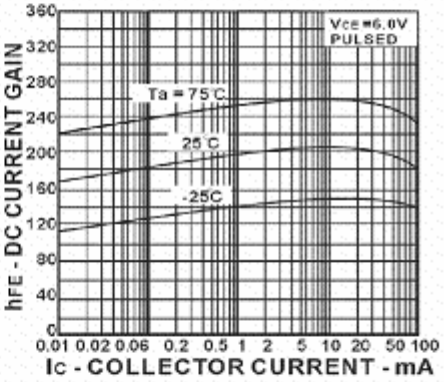
COLLECTOR CURRENT
vs COLLECTOR TO EMITTER VOLTAGE



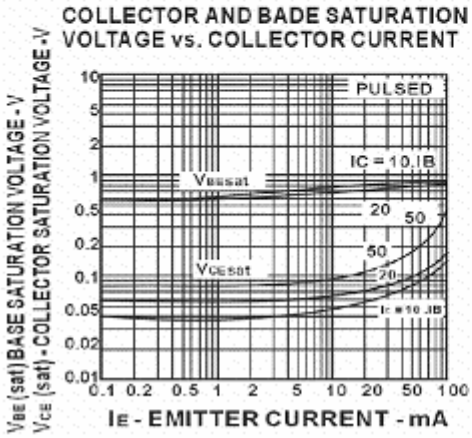
COLLECTOR CURRENT
vs.COLLECTOR TO EMITTER VOLTAGE



DC CURRNT GAIN
vs. COLLECTOR CURRENT



COLLECTOR AND BADE SATURATION
VOLTAGE vs. COLLECTOR CURRENT



DC CURRENT GAIN
vs.COLLECTOR CURRENT