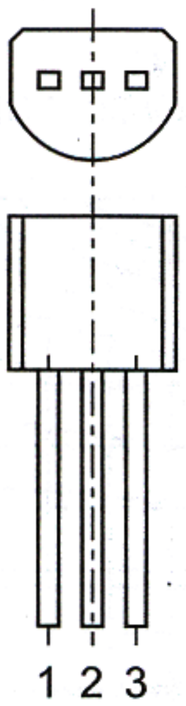
TO-92 Plastic-Encapsulate Transistors

C945 TRANSISTOR(NPN)



TO-92

1.EMITTER

2.COLLECTOR

3.BASE

FEATURES

Power dissipation

P_{CM}: 0.4W (Tamb=25℃)

Collector current

I_{CM}: 0.15 A

Collector-base voltage

$V_{(BR)CBO}$: 60 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to + 150℃

ELECTRICAL CHARACTERISTICS

(Tamb=25℃ unless otherwise specified)

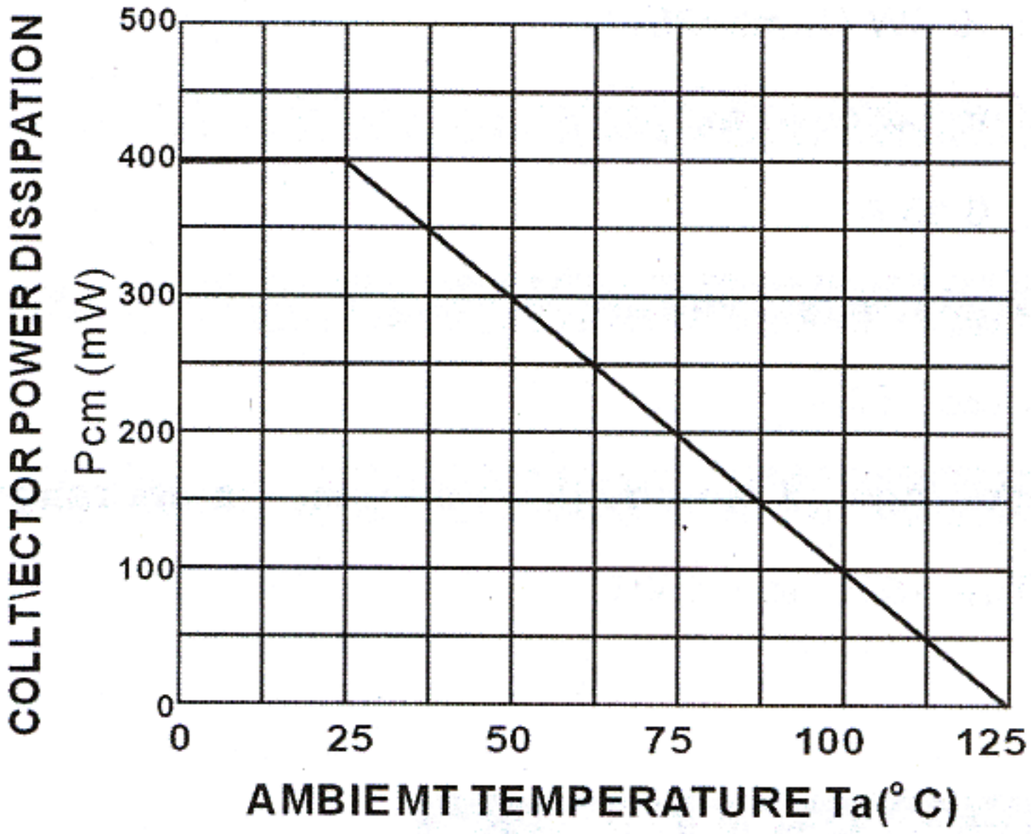
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 1000 μ A, I_E=0	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 0.1 mA, I_B=0	50		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100 μ A, I_C=0	5		V
Collector cut-off current	I_{CBO}	V_{CB}= 60 V, I_E=0		0.1	μ A
Collector cut-off current	I_{CER}	V_{CE}= 55 V, R= 10 MΩ		0.1	μ A
Emitter cut-off current	I_{EBO}	V_{EB}= 5 V, I_C=0		0.1	μ A
DC current gain	$h_{FE(1)}$	V_{CE}= 6 V, I_C= 1 mA	70	700	
	$h_{FE(2)}$	V_{CE}= 6 V, I_C= 0.1 mA	40		
Collector-emitter saturation voltage	V_{CEsat}	I_C= 100 mA, I_B= 10 mA		0.3	V
Base-emitter saturation voltage	V_{BEsat}	I_C= 100 mA, I_B= 10 mA		1	V
Base-emitter voltage	V_{BE}	I_E= 310mA		1.4	V
Transition frequency	f_T	V_{CE}= 6 V, I_C= 10 mA f =30MHz	150		MHz

CLASSIFICATION OF $h_{FE(1)}$

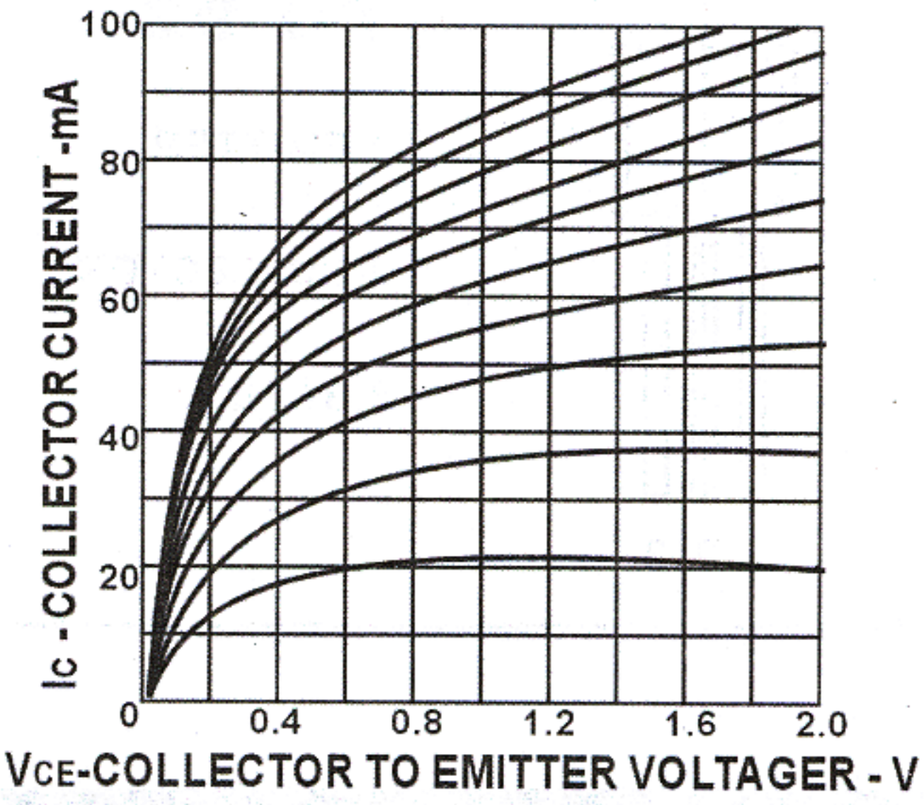
Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700

Typical Characteristics

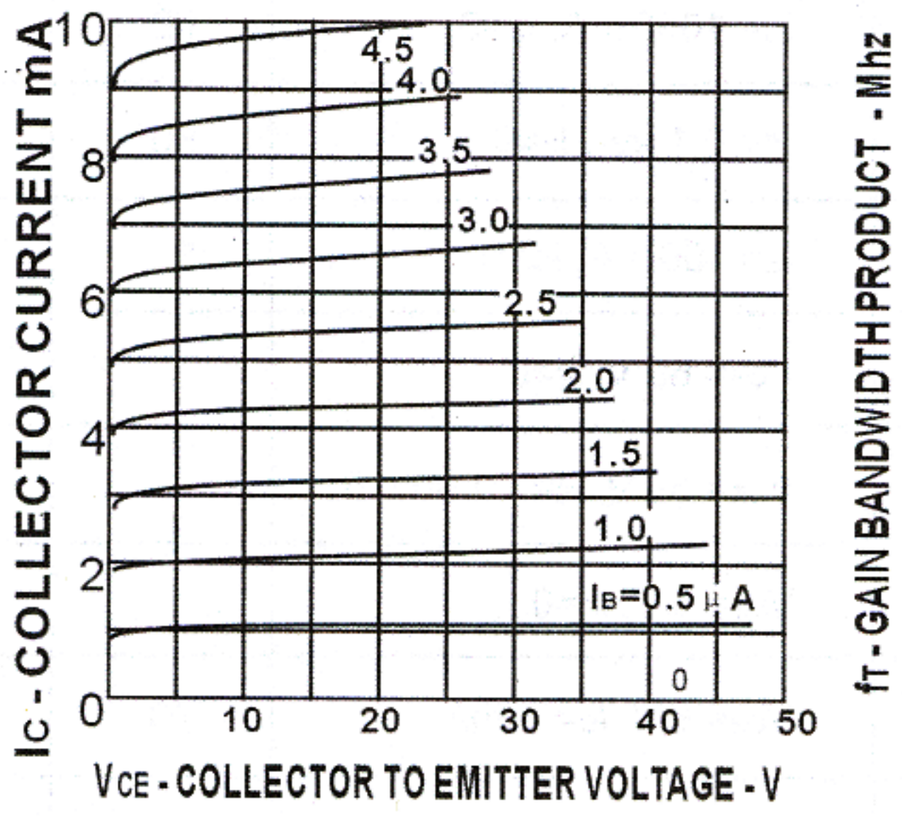
TOTAL Power Dissipation vs AMBIENT Temperature



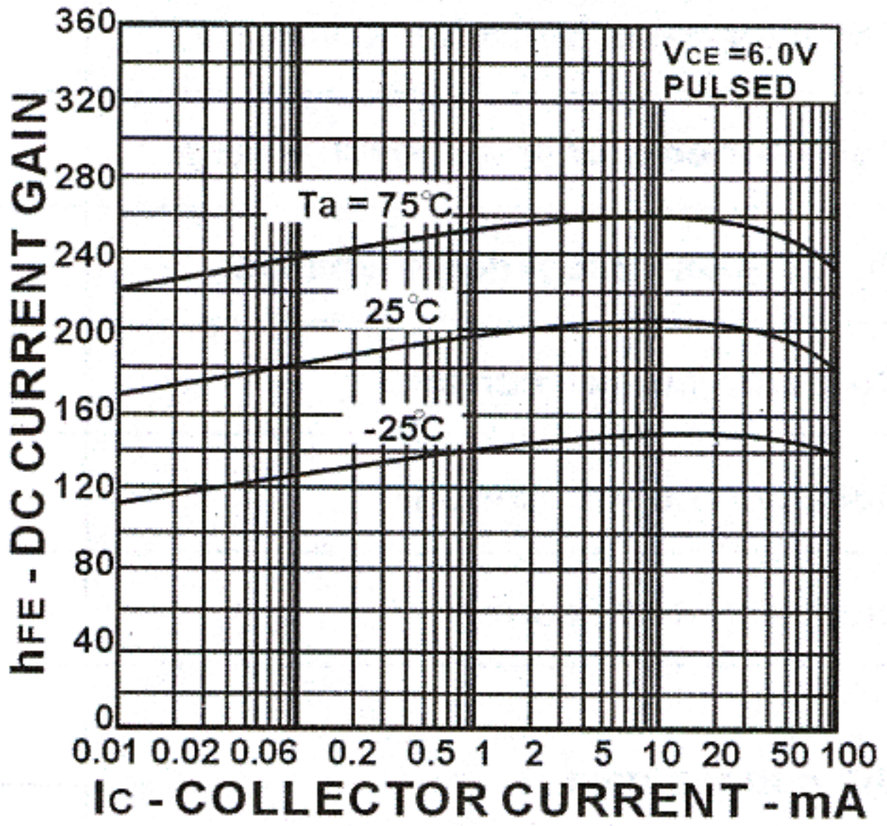
COLLECTOR CURRENT vs COLLECTOR TO EMITTER VOLTAGE



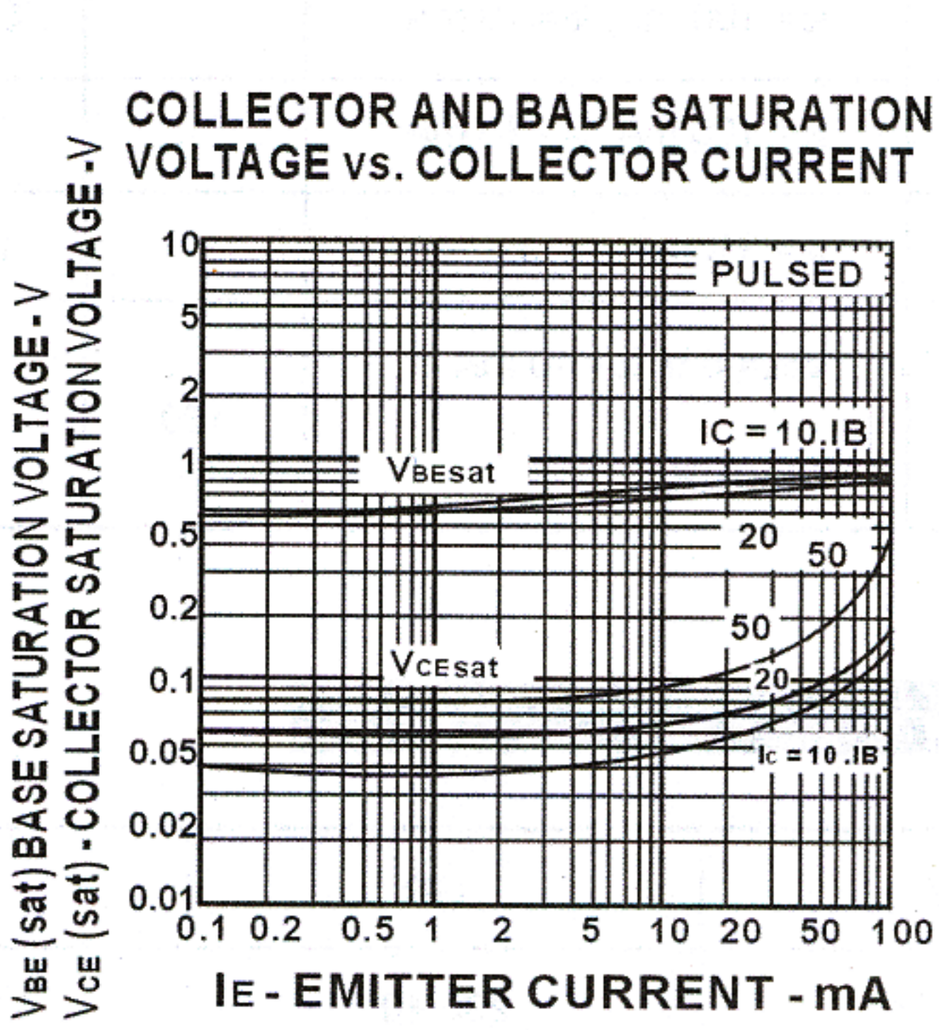
COLLECTOR CURRENT vs.COLLECTOR TO EMITTER VOLTAGE



DC CURRNT GAIN vs. COLLECTOR CURRENT



COLLECTOR AND BADE SATURATION VOLTAGE vs. COLLECTOR CURRENT



DC CURRENT GAIN vs.COLLECTOR CURRENT