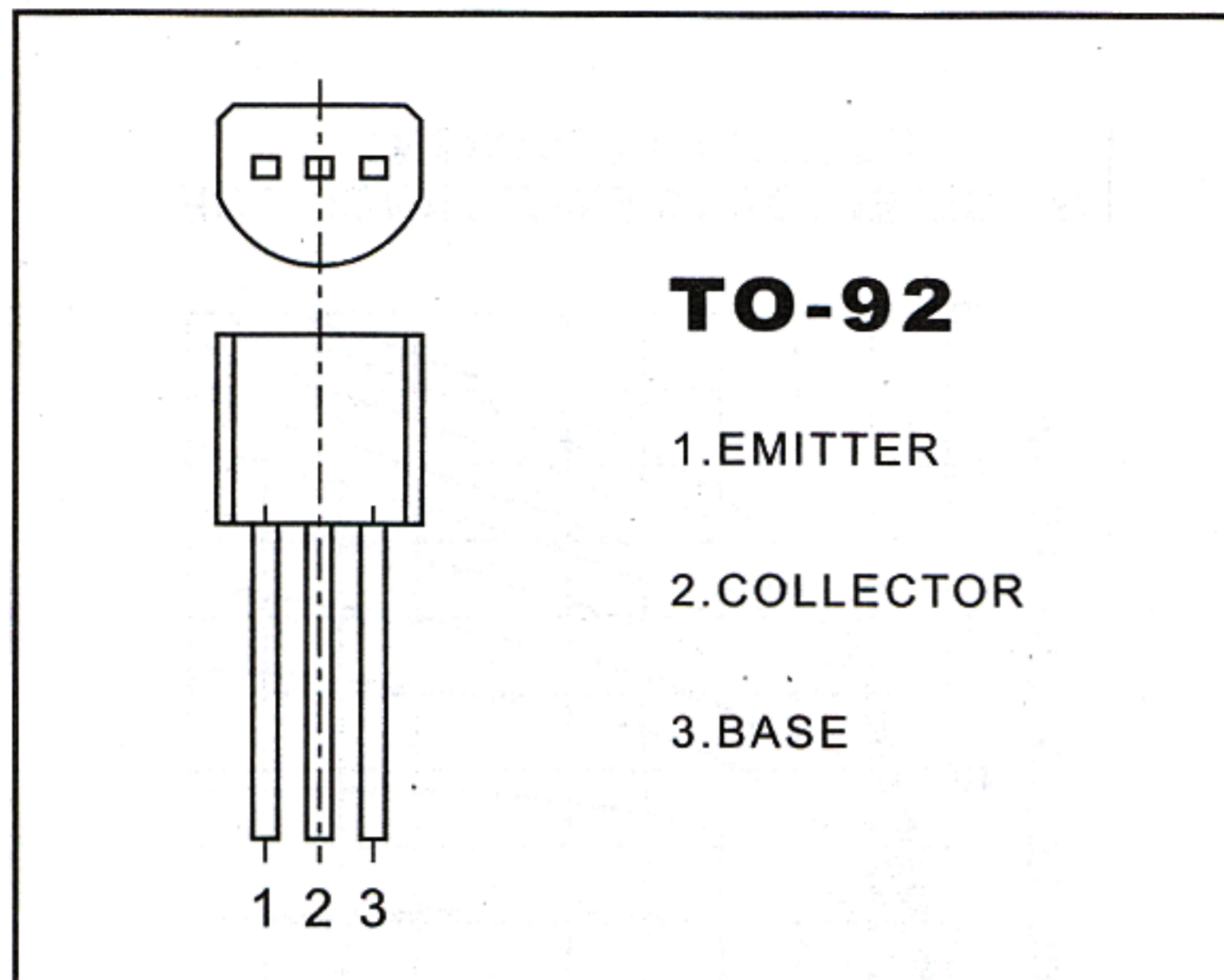


## C945 TRANSISTOR(NPN)



### FEATURES

#### Power dissipation

$P_{CM}$ : 0.4W ( $T_{amb}=25^{\circ}C$ )

#### Collector current

$I_{CM}$ : 0.15 A

#### Collector-base voltage

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

#### Operating and storage junction temperature range

$T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$

### ELECTRICAL CHARACTERISTICS

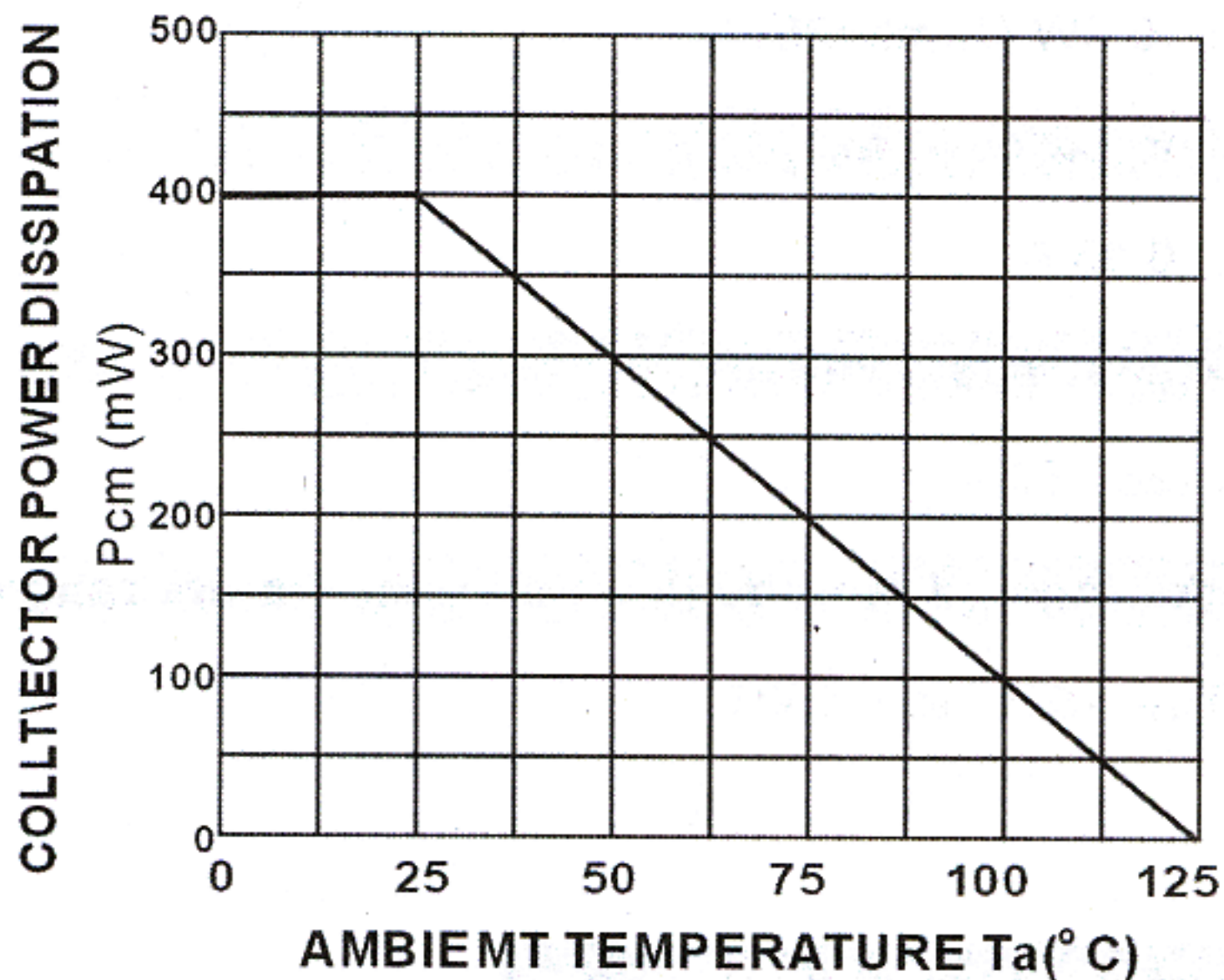
( $T_{amb}=25^{\circ}C$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1000 \mu A, I_E=0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1 mA, I_B=0$	50		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100 \mu A, I_C=0$	5		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60 V, I_E=0$		0.1	$\mu A$
Collector cut-off current	$I_{CER}$	$V_{CE}=55 V, R=10 M\Omega$		0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5 V, I_C=0$		0.1	$\mu A$
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	$V_{BE}$	$I_E=310 mA$		1.4	V
Transition frequency	$f_T$	$V_{CE}=6 V, I_C=10 mA$ $f=30 MHz$	150		MHz

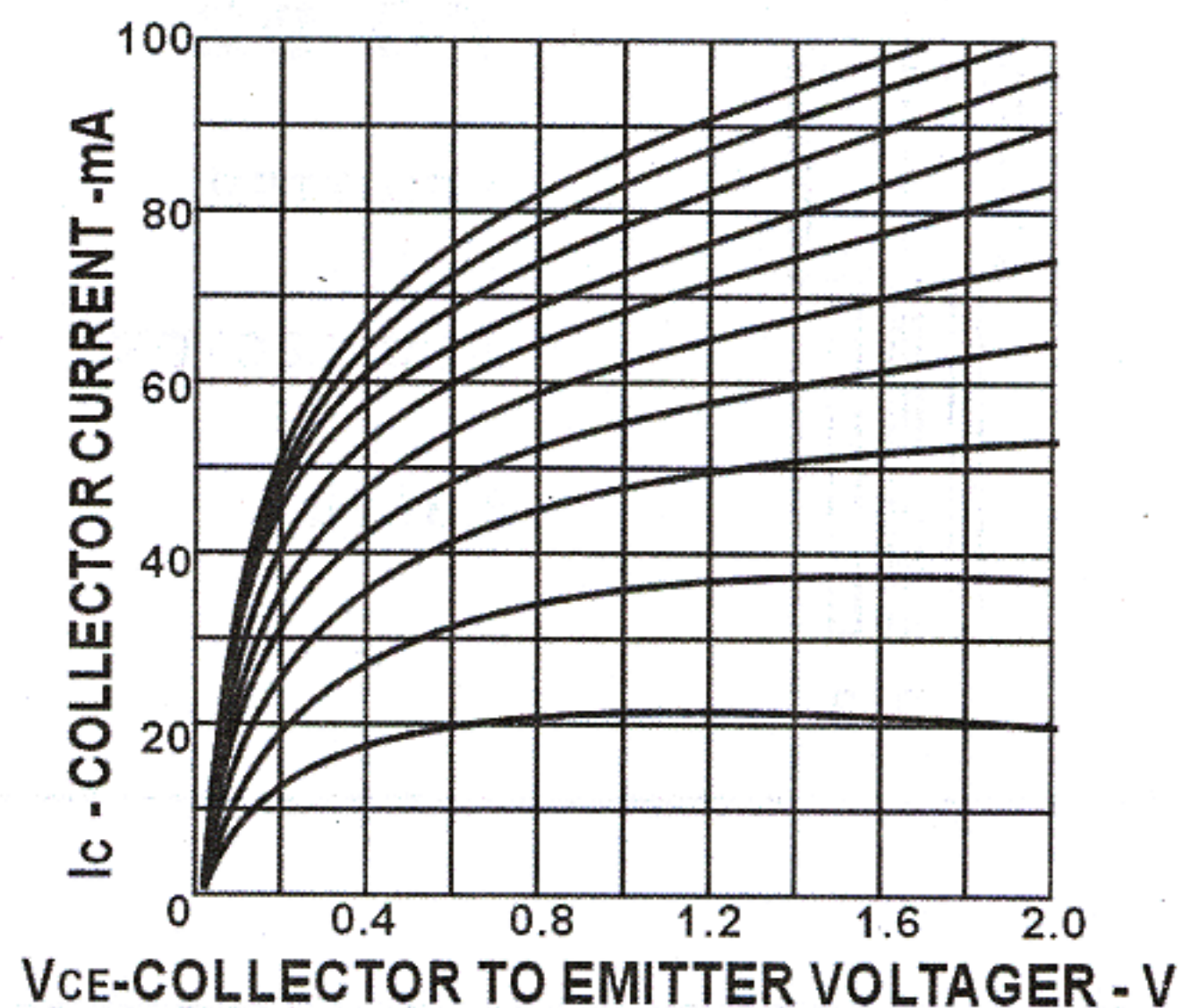
### CLASSIFICATION OF $h_{FE(1)}$

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

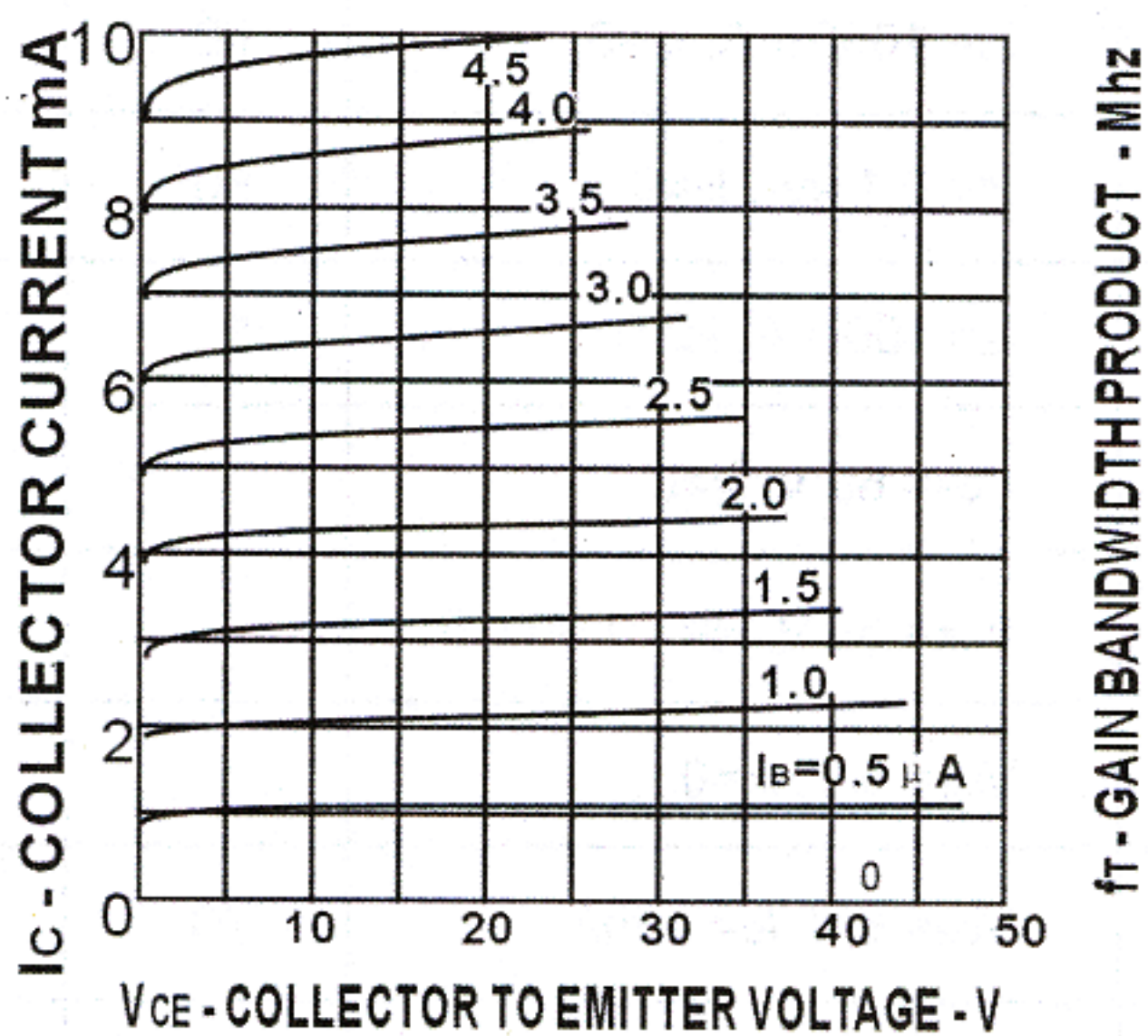
**TOTAL Power Dissipation vs AMBIENT Temperature**



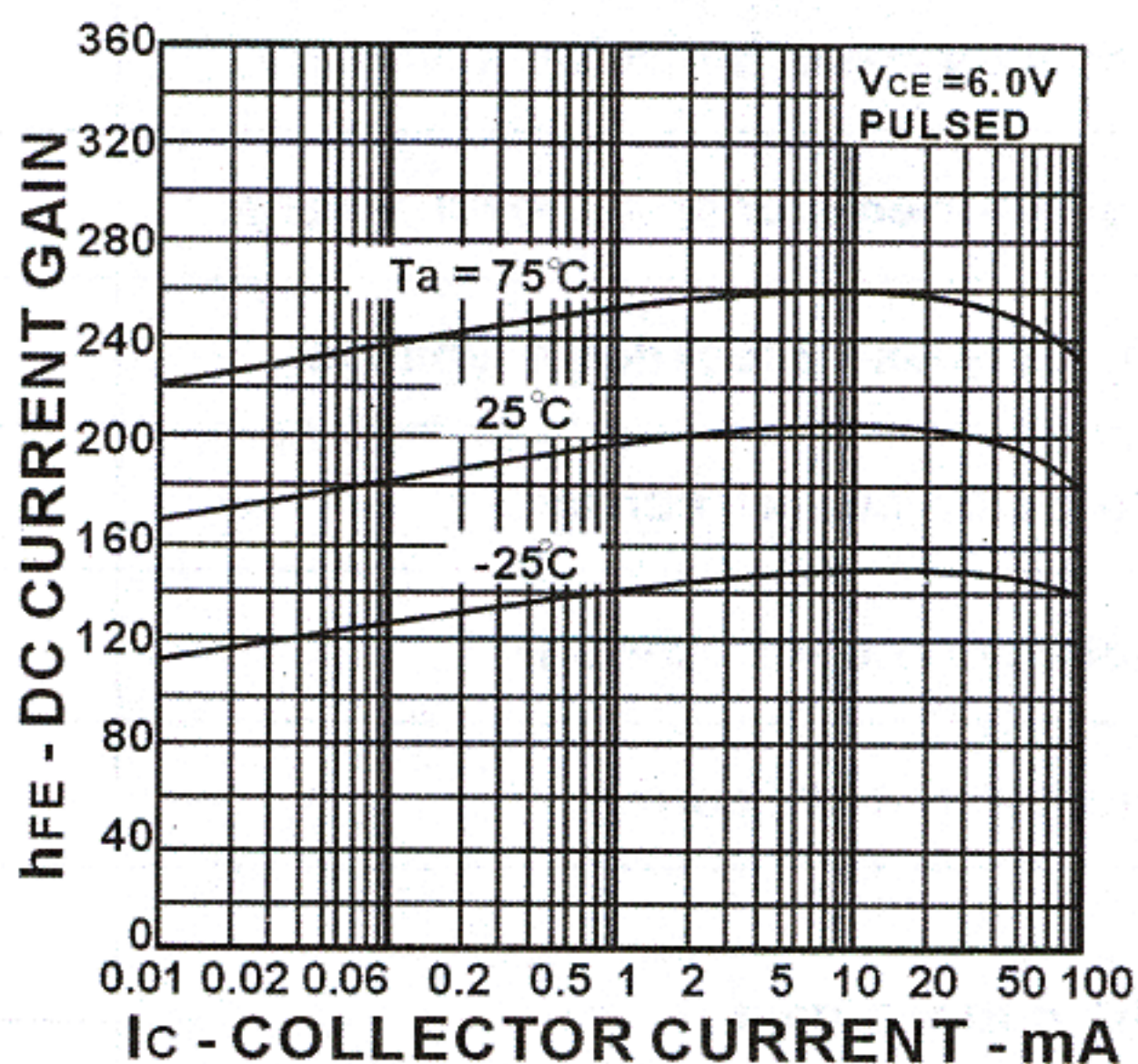
**COLLECTOR CURRENT vs COLLECTOR TO EMITTER VOLTAGE**



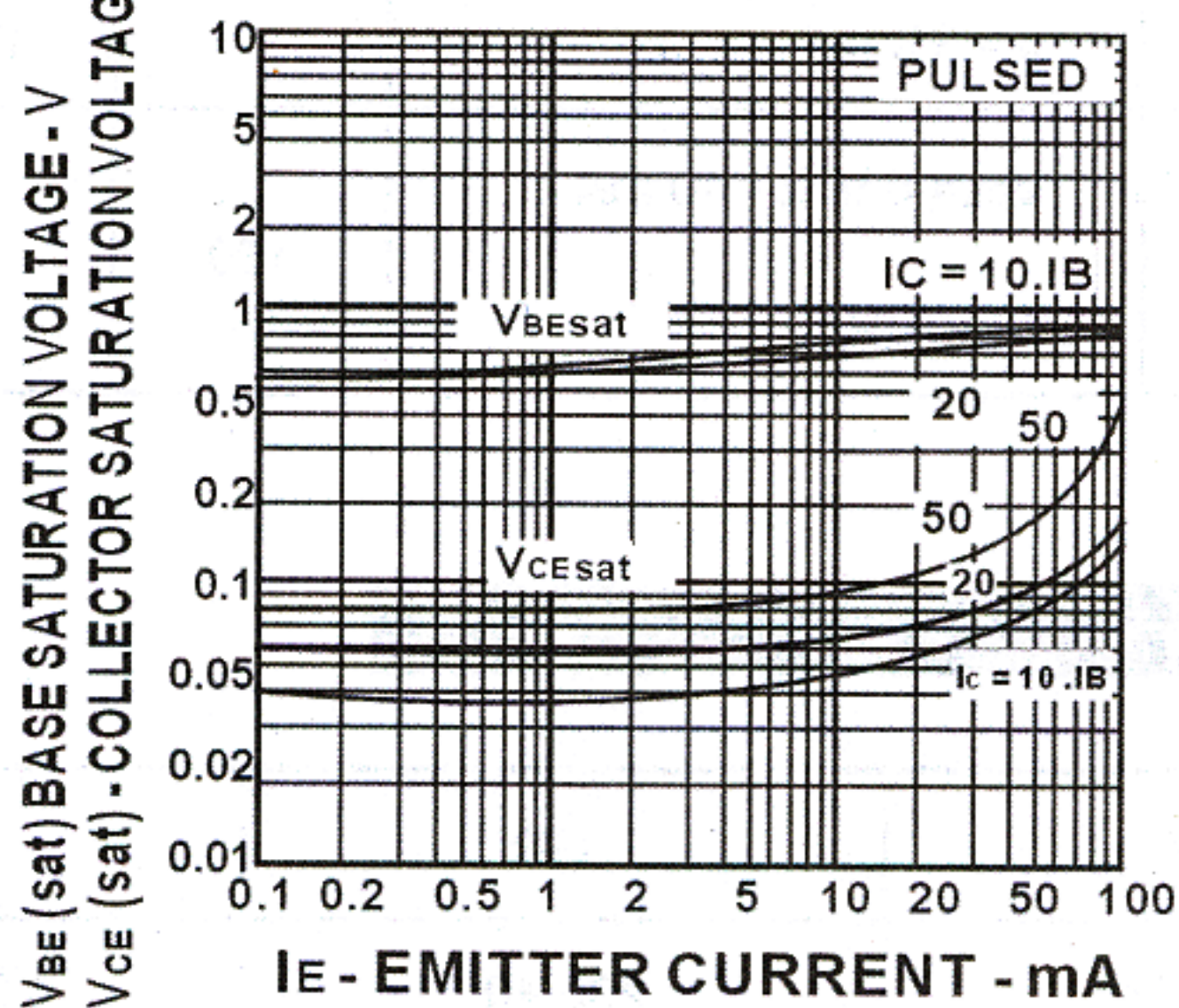
**COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE**



**DC CURRENT GAIN vs. COLLECTOR CURRENT**



**COLLECTOR AND BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT**



**DC CURRENT GAIN vs. COLLECTOR CURRENT**

