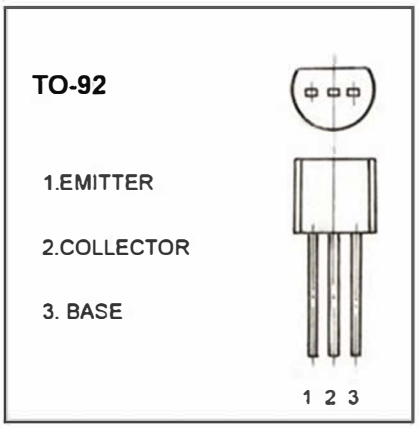
TO-92 Plastic-Encapsulate Transistors

C945 TRANSISTOR (NPN)



FEATURE

- Excellent h_{FE} linearity
- Low noise
- Complementary to A733

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	150	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature	-55-125	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

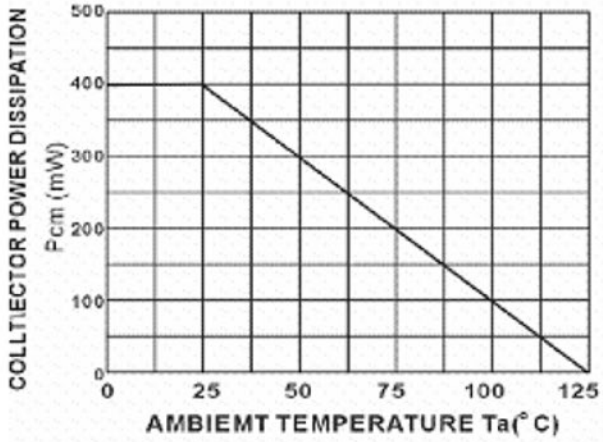
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA , I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=100uA , I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100mA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	uA
Collector cut-off current	I_{CEO}	V_{CE}=45V			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=5V , I_C=0			0.1	uA
DC current gain	$h_{FE(1)}$	V_{CE}=6 V , I_C=1mA	70		700	
	$h_{FE(2)}$	V_{CE}=6 V , I_C=0.1mA	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=100mA, I_B=10mA			1	V
Transition frequency	f_T	V_{CE}=6V,I_C=10mA,f =30 MHz	200			MHz
Collector output capacitance	Cob	V_{CB}=10V,I_E=0,f=1MHz			3.0	pF
Noise figure	NF	VCE=6V,IC=0.1mA RG=10kΩ,f=1kMHz			10	dB

CLASSIFICATION OF $h_{FE(1)}$

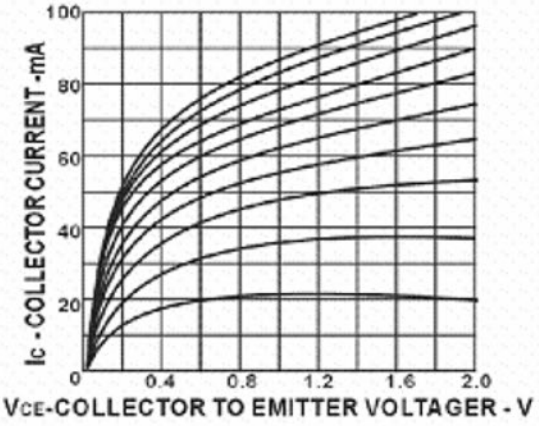
Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700

Typical Characteristics C945

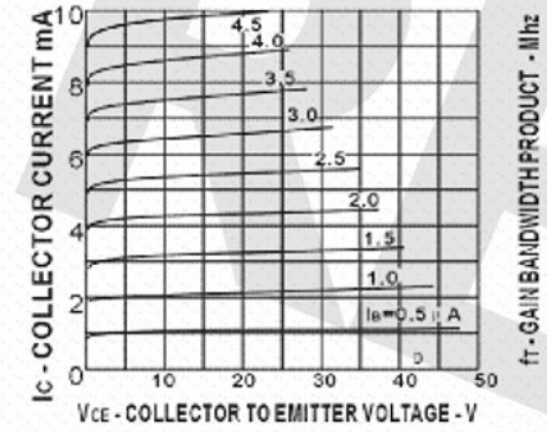
TOTAL Power Dissipation
vs AMBIENT Temperature



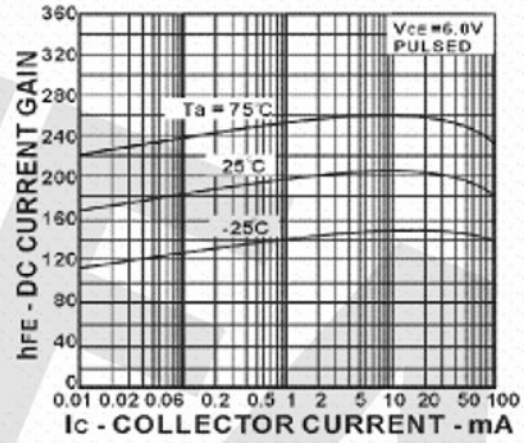
COLLECTOR CURRENT
vs COLLECTOR TO EMITTER VOLTAGE



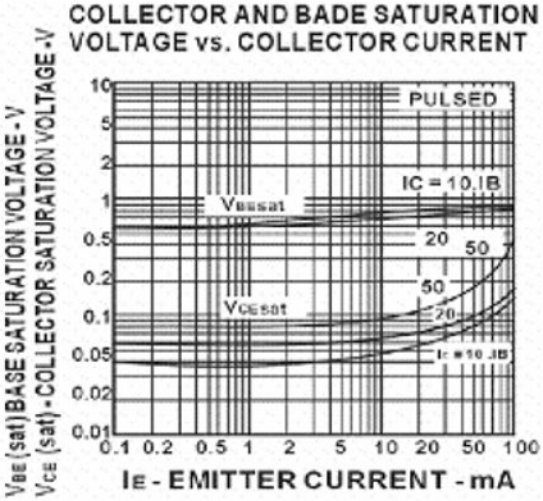
COLLECTOR CURRENT
vs.COLLECTOR TO EMITTER VOLTAGE



DC CURRNT GAIN
vs. COLLECTOR CURRENT



COLLECTOR AND BADE SATURATION
VOLTAGE vs. COLLECTOR CURRENT



DC CURRENT GAIN
vs.COLLECTOR CURRENT