

FEATURES

Complementary to A733

MARKING: CR



C945 (NPN)



MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current -Continuous	I _C	150	mA
Collector Power Dissipation	P _C	0.4	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CBO}	I _C =1mA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{CEO}	I _C =100uA, I _B =0	50			V
Emitter-base breakdown voltage	V _{EBO}	I _E =100mA, I _C =0	5			V
Collector cut-off current	I _{CB}	V _{CB} =60V, I _E =0			0.1	uA
Collector cut-off current	I _{CE}	V _{CE} =45V			0.1	uA
Emitter cut-off current	I _{EB}	V _{EB} =5V, I _C =0			0.1	uA
DC current gain	h _{FE} (1)	V _{CE} =6V, I _C =1mA	70		700	
	h _{FE} (2)	V _{CE} =6V, 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	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz			3.0	pF
Noise figure	NF	V _{CE} =6V, I _C =0.1mA R _G =10kΩ, f=1kHz			10	dB

CLASSIFICATION OF h_{FE}

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

C945 Typical Characteristics

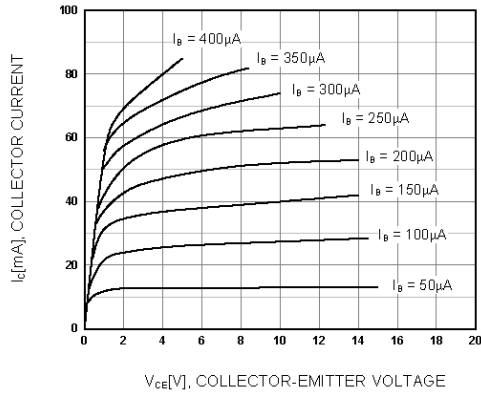


Figure 1. Static Characteristic

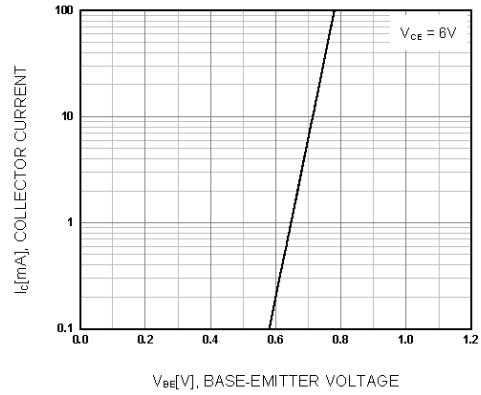


Figure 2. Transfer Characteristic

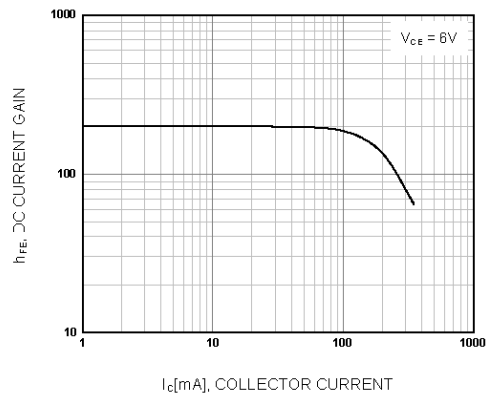
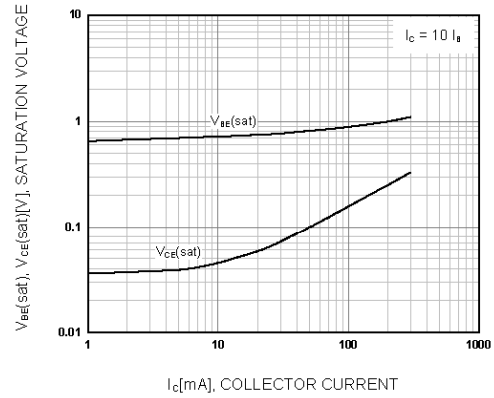


Figure 3. DC current Gain



**Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

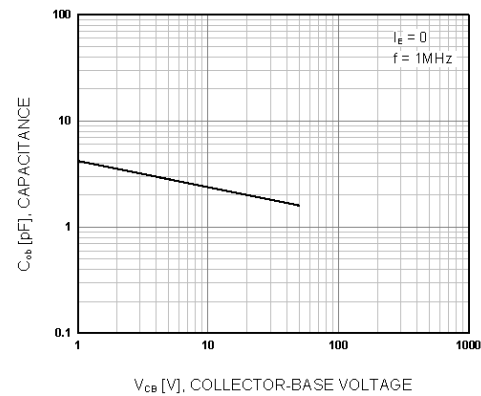


Figure 5. Output Capacitance

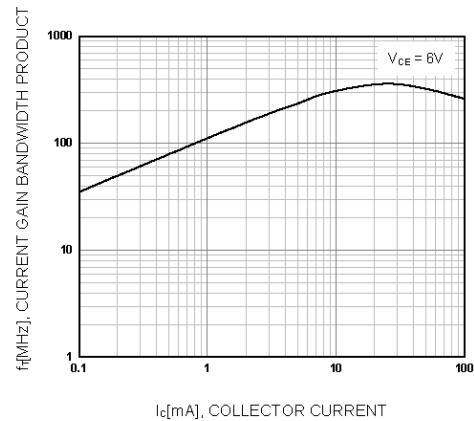


Figure 6. Current Gain Bandwidth Product