



TO-92 Plastic-Encapsulate Transistors

C945 TRANSISTOR (NPN)

FEATURES

Power dissipation

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

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 $+150^{\circ}C$

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ 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	$V_{(BR)CEO}$	$I_C=100\mu A, I_B=0$	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}	$V_{CB}=60V, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=45V$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
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	$V_{CE}=6V, I_C=10mA, f=30MHz$	200			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			3.0	pF
Noise figure	NF	$V_{CE}=6V, I_C=0.1mA$ $R_g=10k\Omega, f=1kHz$		4	10	dB

CLASSIFICATION OF $h_{FE(1)}$

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