JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

C945 TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM}: 0.4 W (Tamb=25℃)

Collector current

I_{CM}: 0.15 A

Collector-base voltage

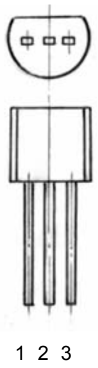
$V_{(BR)\,CBO}$: 60 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	Ic=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=100μA, 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 =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=1kMHz		4	10	dB

CLASSIFICATION OF $h_{FE(1)}$

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