JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

C945 TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM}: 0.4W (Tamb=25℃)

Collector current

I_{CM}: 0.15A

Collector-base voltage

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

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

TO—92

1. EMITTER
2. COLLECTOR
3. BASE

1 2 3

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}=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	V_{CE}=6V,I_C=0.1mA R_g=10kΩ,f=1kMHz		4	10	dB

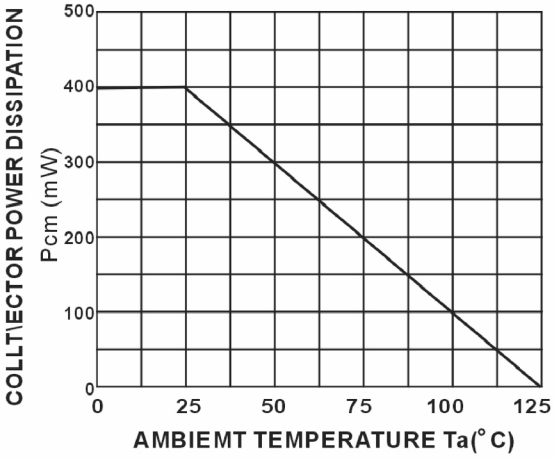
CLASSIFICATION OF $h_{FE(1)}$

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

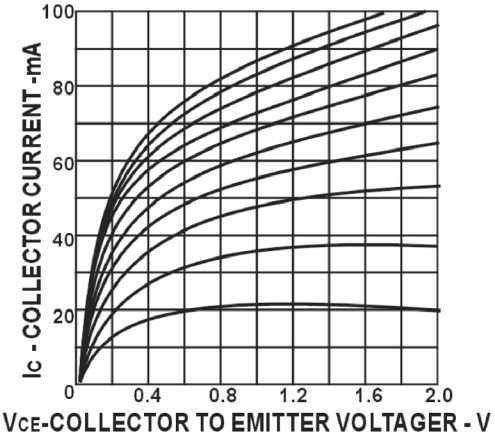
Typical Characteristics

C945

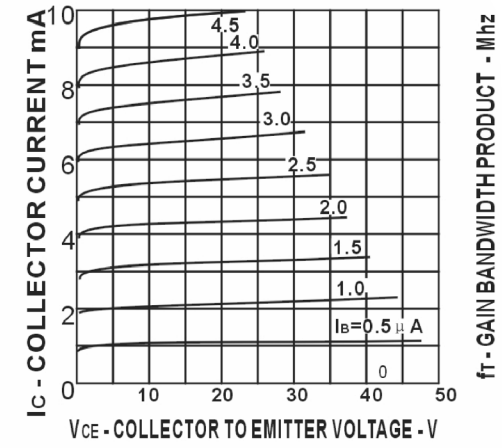
TOTAL Power Dissipation
vs AMBIENT Temperature



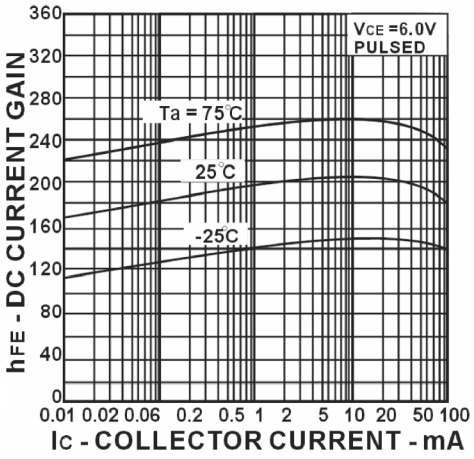
COLLECTOR CURRENT
vs COLLECTOR TO EMITTER VOLTAGE



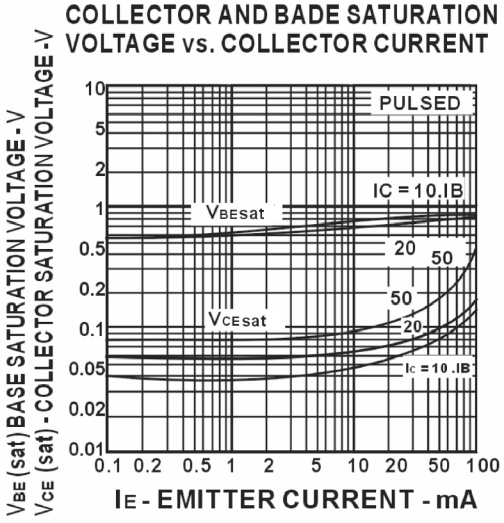
COLLECTOR CURRENT
vs.COLLECTOR TO EMITTER VOLTAGE



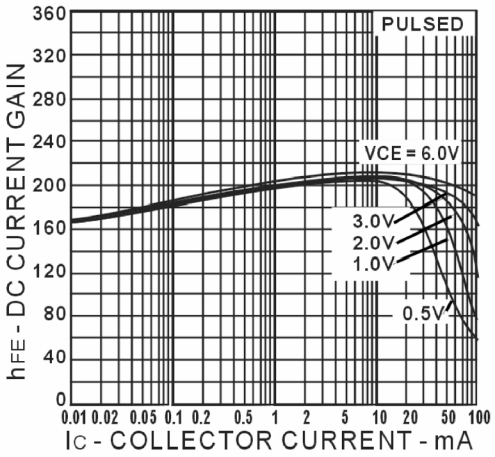
DC CURRNT GAIN
vs. COLLECTOR CURRENT



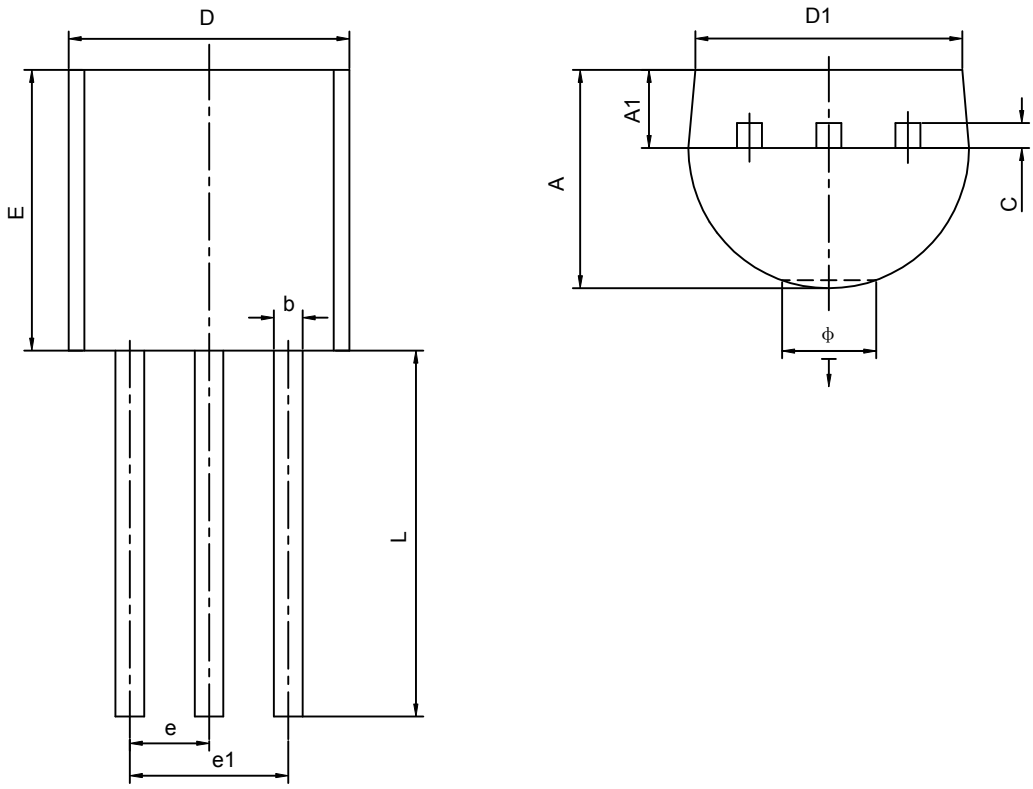
COLLECTOR AND BADE SATURATION
VOLTAGE vs. COLLECTOR CURRENT



DC CURRENT GAIN
vs.COLLECTOR CURRENT



TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
⊤	0.000	0.380	0.000	0.015