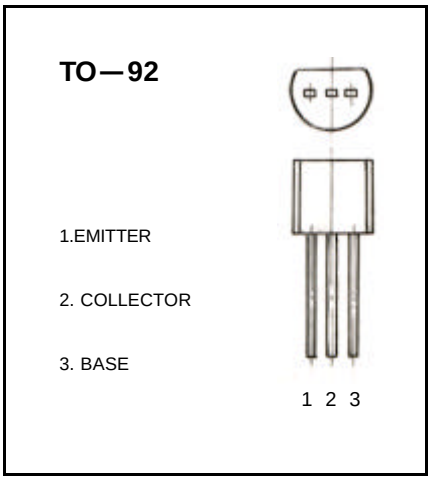
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JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO.,LTD

TO-92 Plastic-Encapsulate Transistors

D965 TRANSISTOR (NPN)



FEATURES

Power dissipation

P_{CM} : 0.75 W (Tamb=25℃)

Collector current

I_{CM} : 5 A

Collector-base voltage

$V_{(BR)CBO}$: 42 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150℃

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	42			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	I_C= 1 mA, I_B=0	22			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 10 μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}= 30 V , I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 6 V, I_C=0			0.1	μA
DC current gain	$H_{FE\ (1)}$	V_{CE}= 2 V, I_C= 0.15 mA	150			
	$H_{FE\ (2)}$	V_{CE}= 2V, I_C = 500 mA	340		950	
	$H_{FE\ (3)}$	V_{CE}= 2V, I_C = 2000 mA	150			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=3000mA,I_B=100 mA			0.35	V

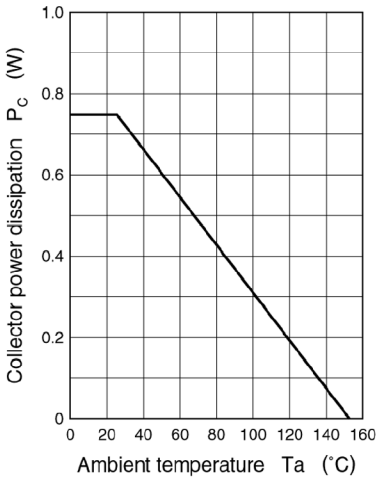
CLASSIFICATION OF $H_{FE(2)}$

Rank	R	T
Range	340-600	560-950

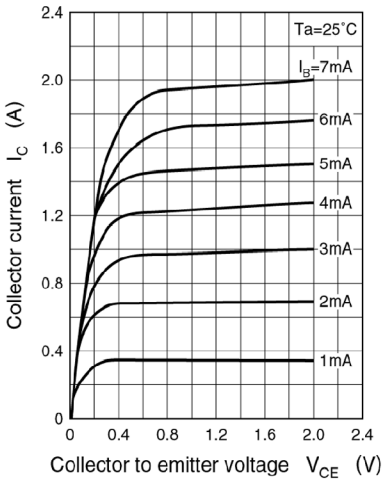
Typical Characteristics

D965

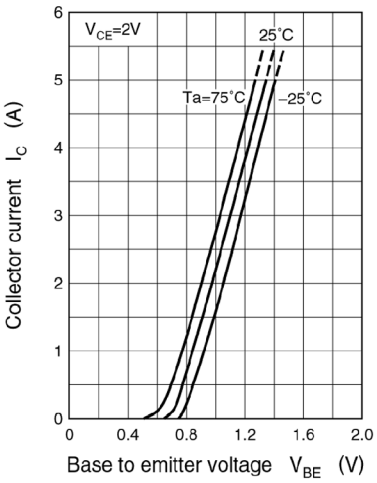
P_C — Ta



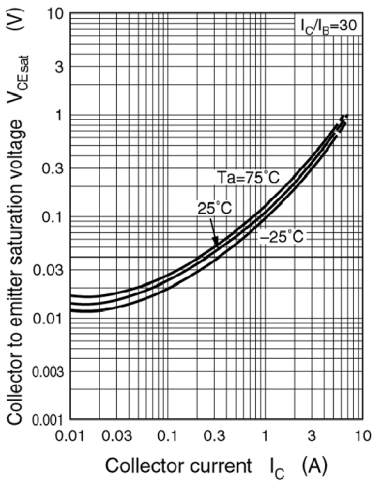
I_C — V_{CE}



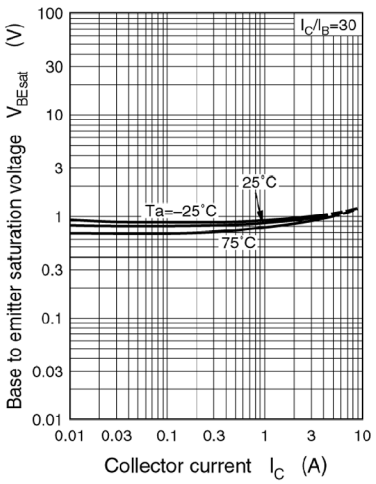
I_C — V_{BE}



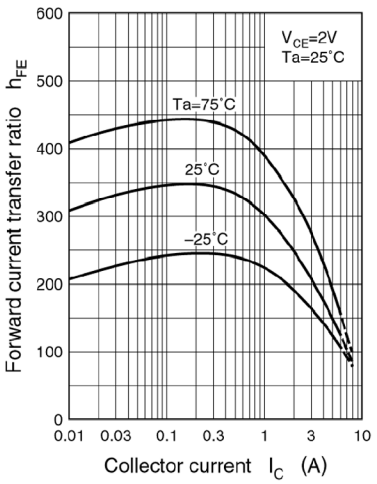
V_{CEsat} — I_C



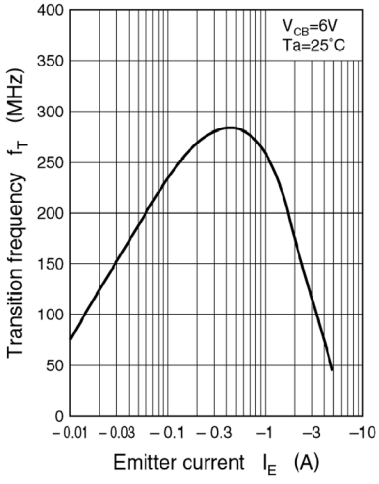
V_{BEsat} — I_C



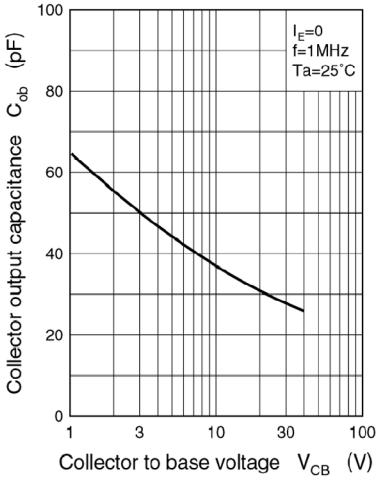
h_{FE} — I_C



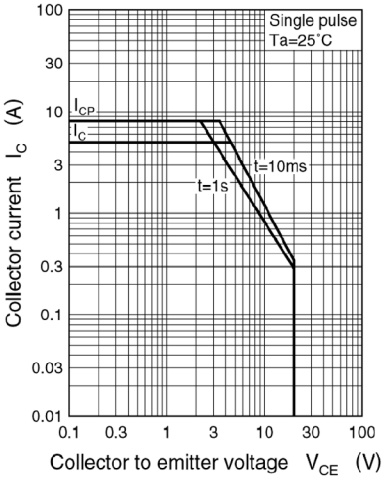
f_T — I_E



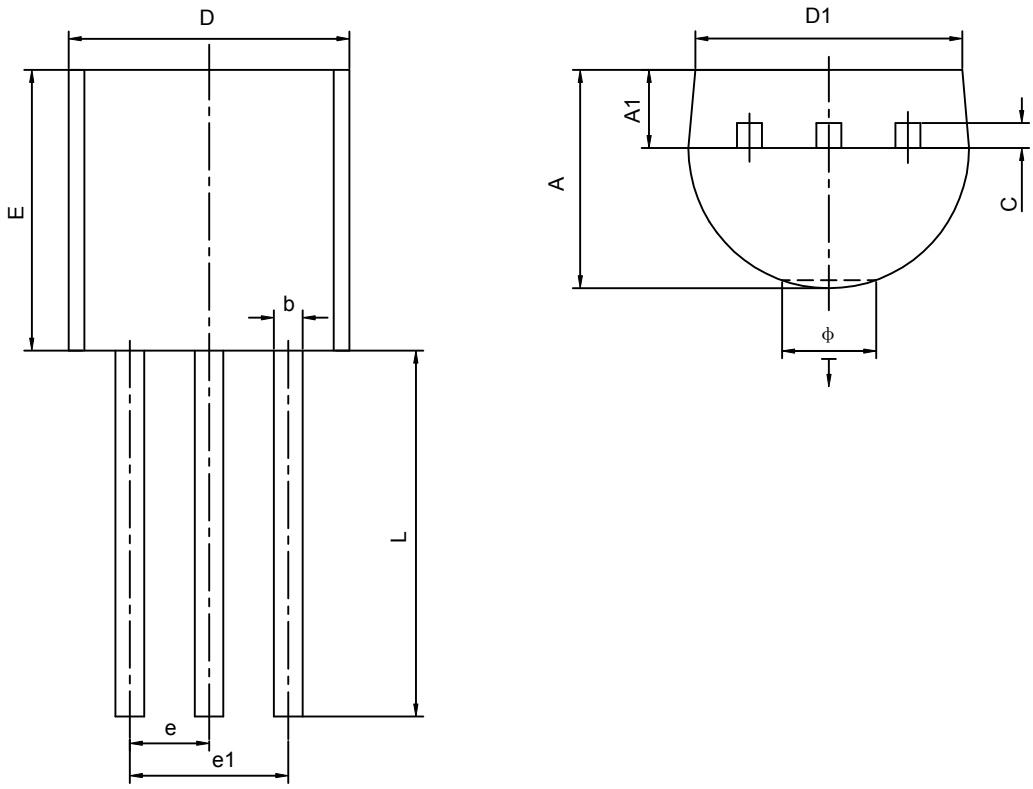
C_{ob} — V_{CB}



Area of safe operation (ASO)



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