



TO-92 Plastic-Encapsulate Transistors

D965 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM} : 0.75 \text{ W (} T_{amb}=25 \text{)}$$

Collector current

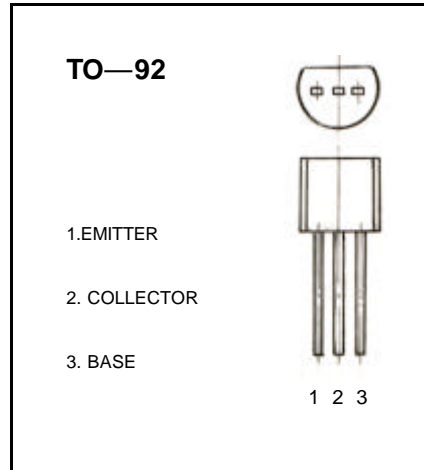
$$I_{CM} : 5 \text{ A}$$

Collector-base voltage

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

Operating and storage junction temperature range

$$T_J, T_{stg}: -55 \text{ to } +150$$



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

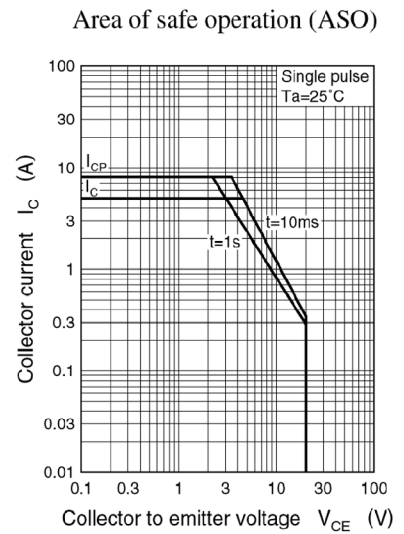
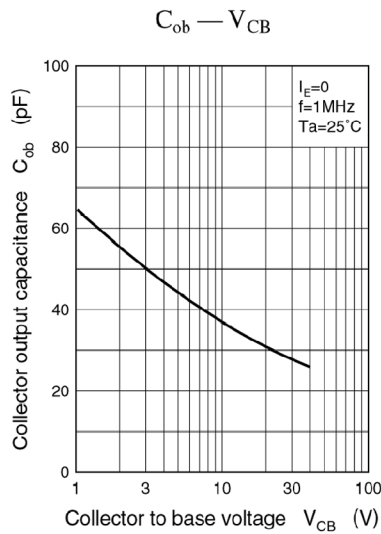
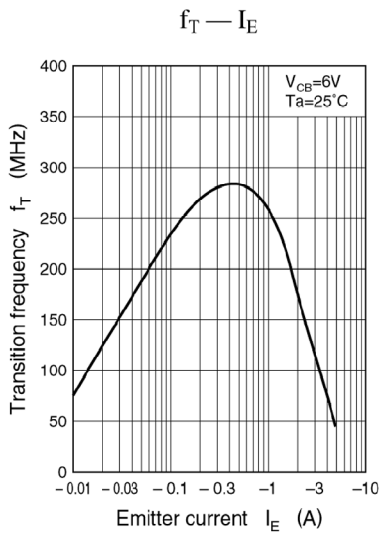
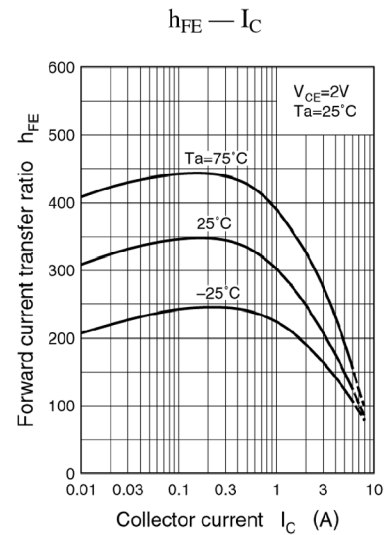
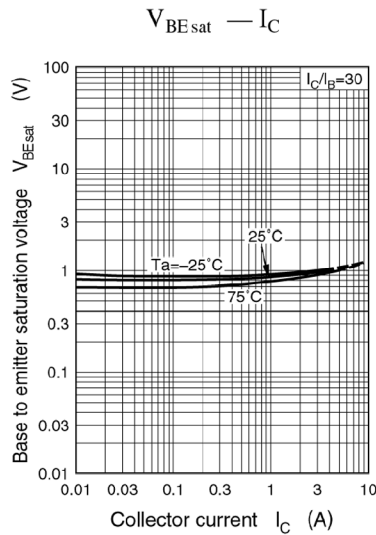
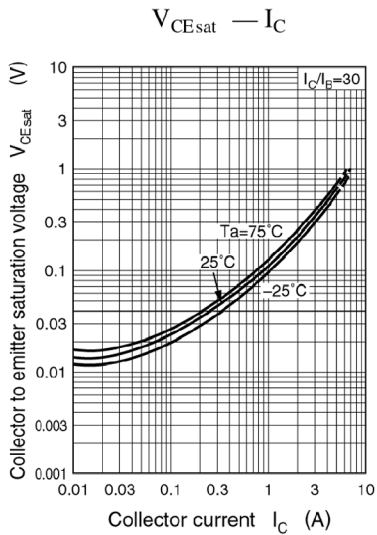
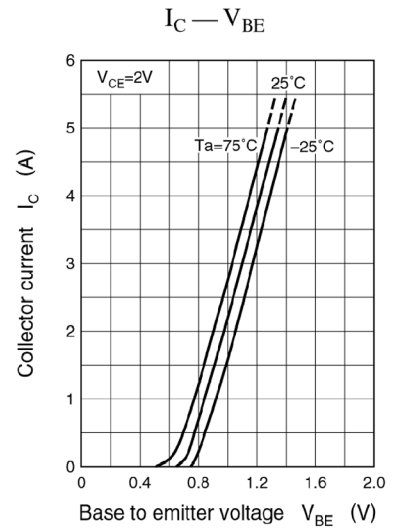
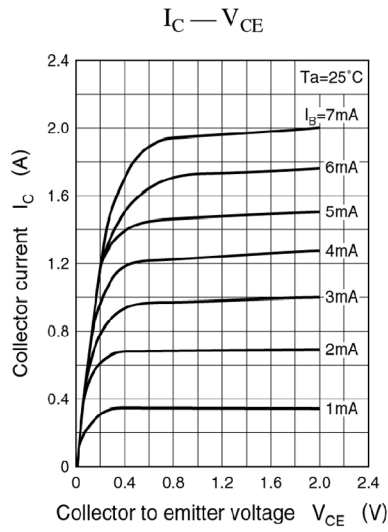
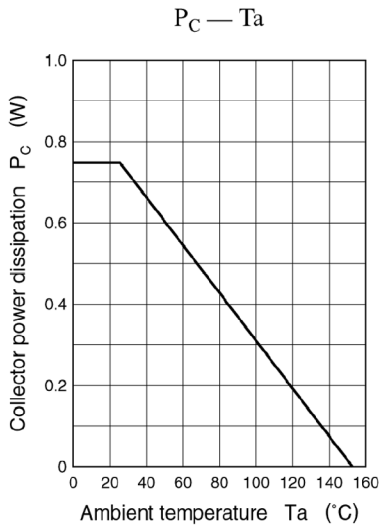
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	42			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C= 1 \text{ mA}, I_B=0$	22			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E= 10 \mu\text{A}, I_C=0$	6			V
Collector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

CLASSIFICATION OF $H_{FE(2)}$

Rank	R	T
Range	340-600	560-950

Typical Characteristics

D965



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