



# 东莞市华远电子有限公司

DONG GUAN SHI HUA YUAN ELECTRON CO.,LTD.

TEL: 86-769-5335378 86-769-5305266 FAX: 86-769-5316189

## TO-92 Plastic-Encapsulate Transistors

### 2SC1008 TRANSISTOR ( NPN )

#### FEATURES

Power dissipation

$P_{CM} : 0.8 \text{ W ( } T_{amb}=25 \text{ )}$

Collector current

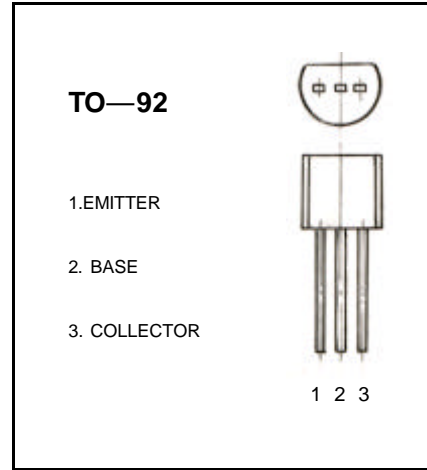
$I_{CM} : 0.7 \text{ A}$

Collector-base voltage

$V_{(BR)CBO} : 80 \text{ V}$

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	$V_{(BR)CBO}$	$I_C=100 \mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10 \mu A, I_C=0$	8			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=2V, I_C=50mA$	40		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.1	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=50mA$	30			MHz

#### CLASSIFICATION OF $h_{FE}$

Rank	R	O	Y	G
Range	40-80	70-140	120-240	200-400

# Typical Characteristics

# 2SC1008

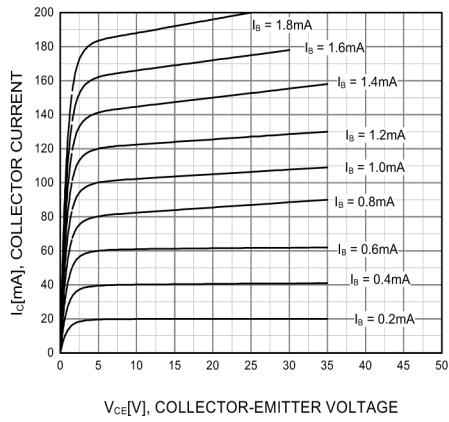


Figure 1. Static Characteristic



Figure 2. DC current Gain

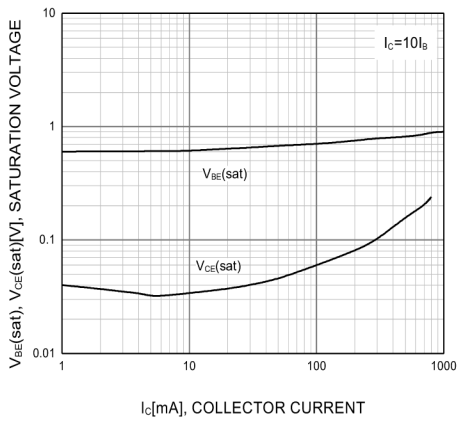


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

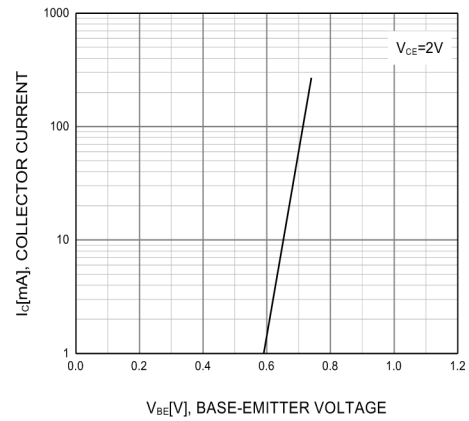


Figure 4. Base-Emitter On Voltage

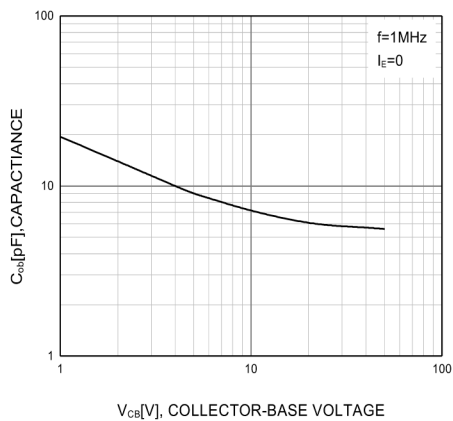


Figure 5. Collector Output Capacitance

## 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