

REPLACEMENT TYPE : 2SC1008

FEATURES

- General Purpose Switching and Amplification



1:EMITTER 2:BASE 3:COLLECTOR

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	80	V
Collector-Emitter Voltage	V _{CEO}	60	V
Emitter-Base Voltage	V _{EBO}	8	V
Collector Current-Continuous	I _C	700	mA
Collector Power Dissipation	P _C	800	mW
Junction Temperature	T _J	150	°C
Thermal Resistance Junction to Ambient	R _{θJA}	156	°C/W
Storage Temperature	T _{stg}	-55~+150	°C

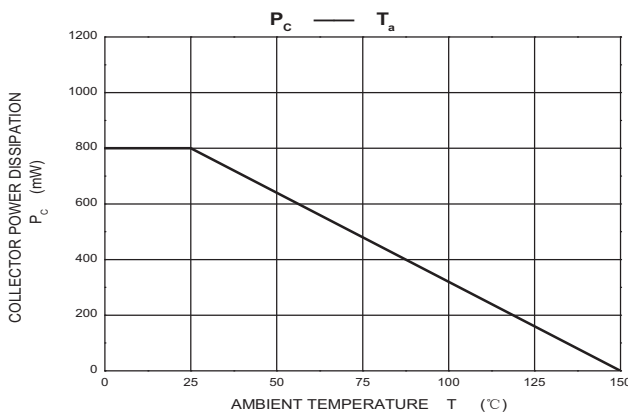
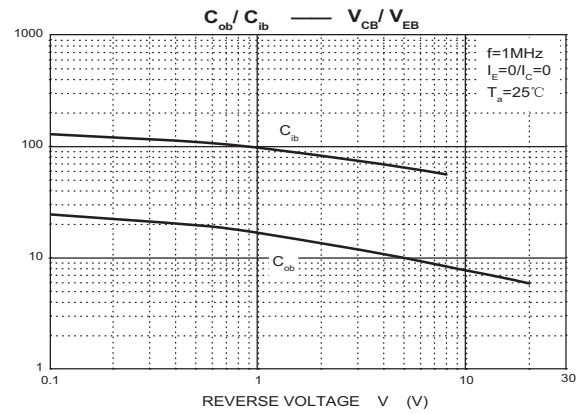
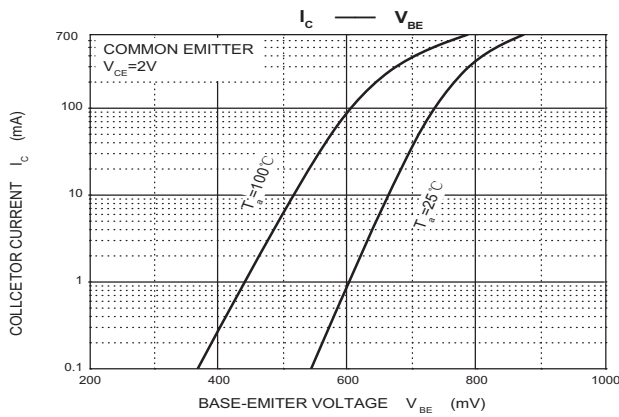
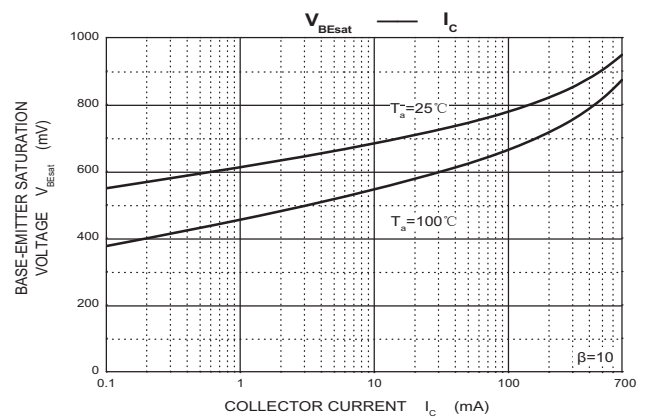
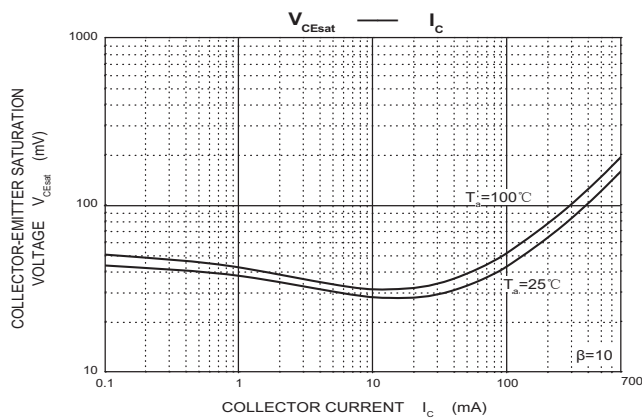
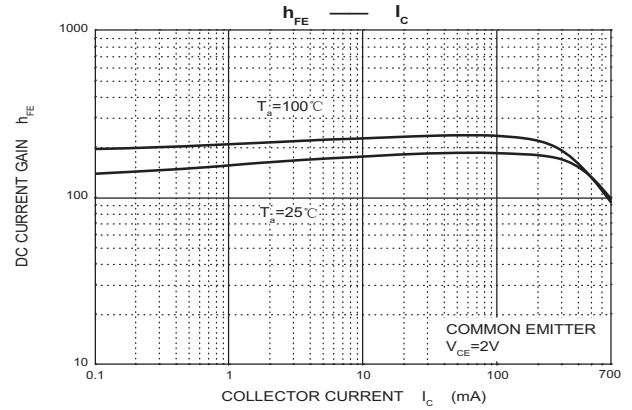
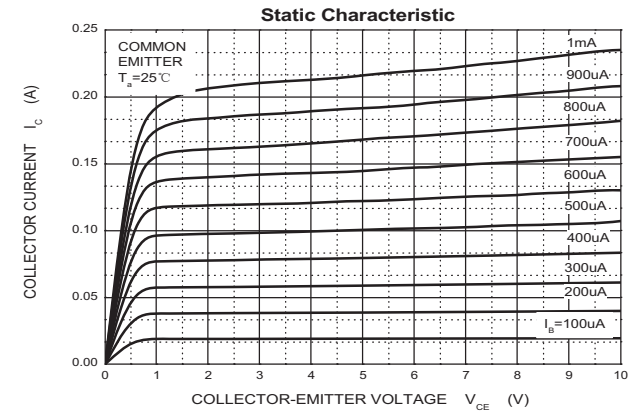
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

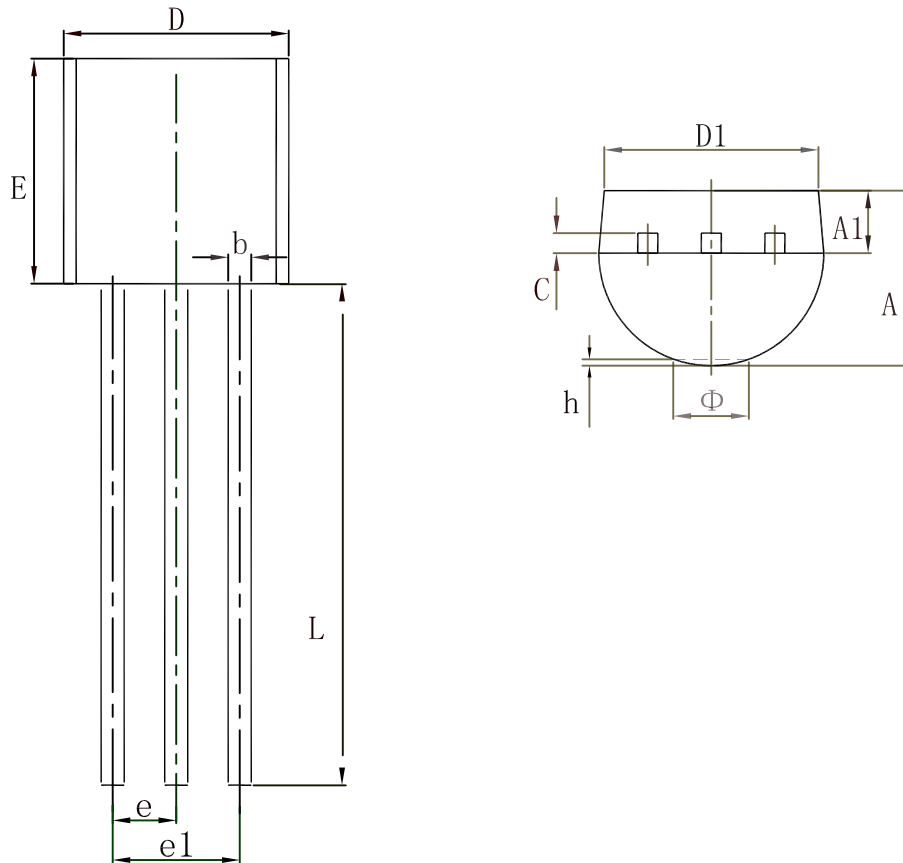
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V _{CBO}	I _C =0.1mA, I _E =0	80			V
Collector-Emitter Breakdown Voltage	V _{CEO}	I _C =10mA, I _B =0	60			V
Emitter-Base Breakdown Voltage	V _{EBO}	I _E =0.01mA, I _C =0	8			V
Collector Cut-off Current	I _{CBO}	V _{CB} =60V, I _E =0			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} =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
Collector Output Capacitance	C _{OB}	V _{CB} =10V, I _C =0, f=1MHz		8		pF
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

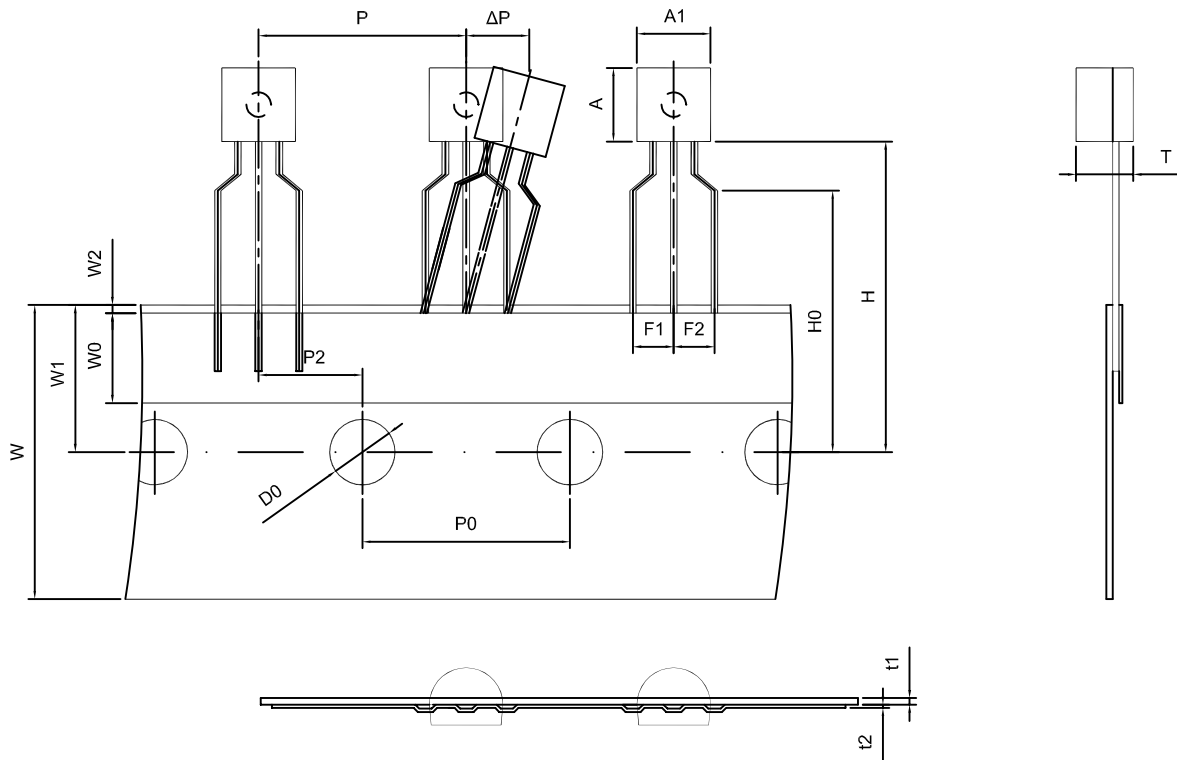
Typical Characteristics



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	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Package Taping Dimension



Dimensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5±0.2	4.5±0.2	3.5±0.2	12.7±0.3	12.7±0.2	6.35±0.3	2.5±0.3	2.5±0.3	18.0+1.0/-0.5
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0±0.5	9.0±0.5	1.0 MAX.	19.0±1.0	16.0±0.5	4.0±0.5	0.4±0.05	0.2±0.05	0 ± 1.0

