

TO-92 Plastic-Encapsulate Transistors

S8050 TRANSISTOR (NPN)

FEATURES

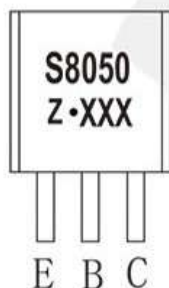
- Complimentary to S8550
- Collector current: $I_C=0.5A$

TO-92

- 1.EMITTER
2.BASE
3.COLLECTOR

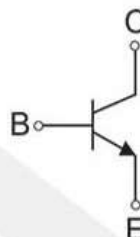


MARKING



S8050=Device code
Solid dot=Green molding compound device,
if none,the normal device
Z=Rank of h_{FE} ,
XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
S8050	TO-92	Bulk	1000pcs/Bag
S8050-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.5	A
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	$^{\circ}C / W$
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

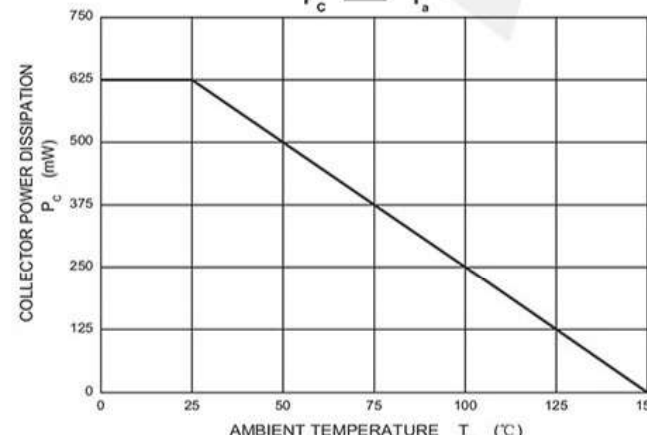
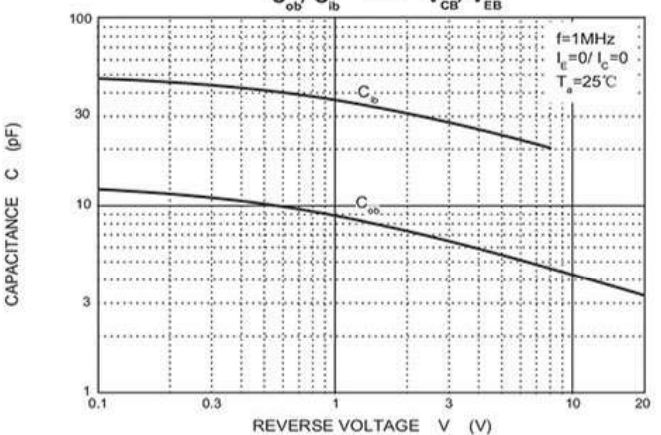
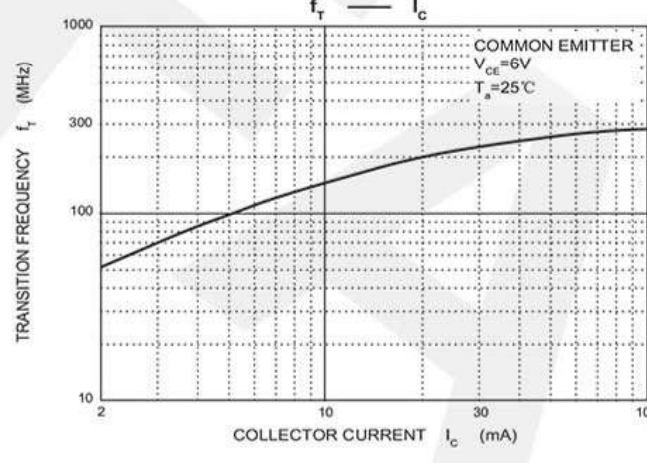
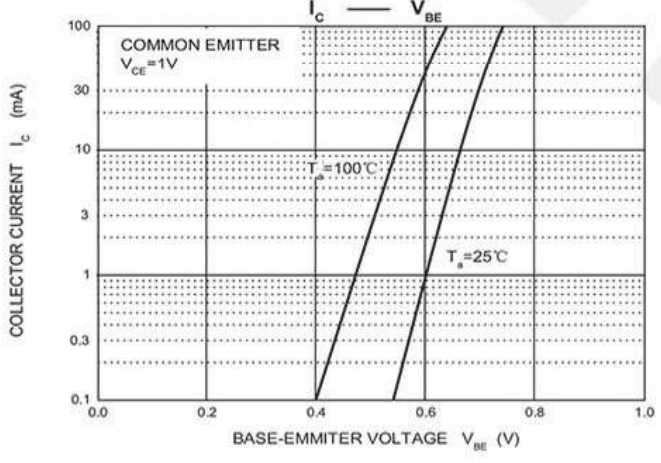
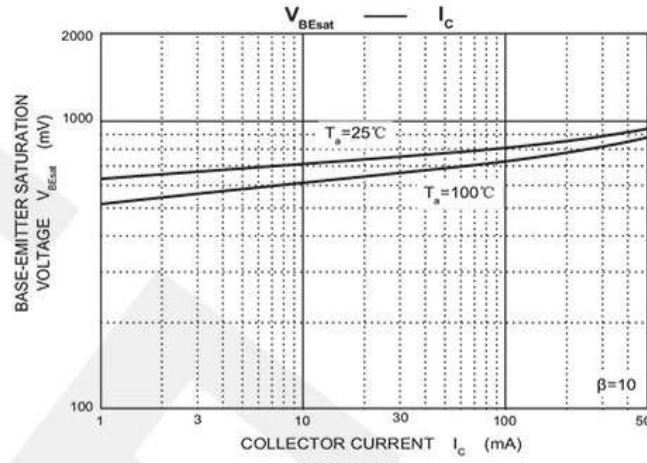
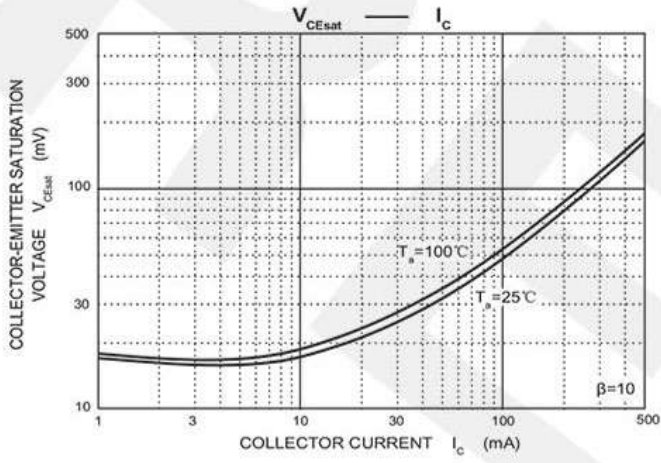
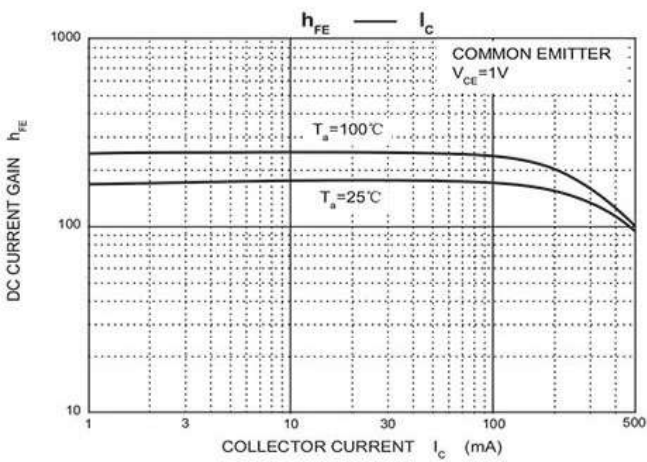
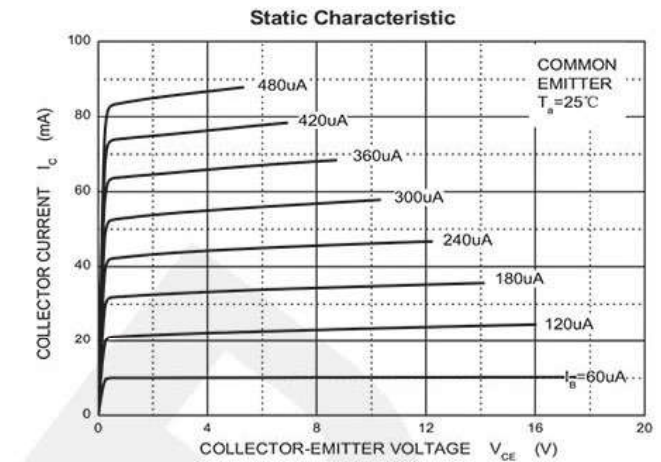
T_a=25 °C unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100μA, I _E =0	40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 0.1mA, I _B =0	25			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} = 40 V , I _E =0			0.1	μA
Collector cut-off current	I _{CEO}	V _{CE} = 20 V , I _B =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} = 1V, I _C = 50mA	85		400	
	h _{FE(2)}	V _{CE} = 1V, I _C = 500mA	50			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA			0.6	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =500mA, I _B =50mA			1.2	V
Transition frequency	f _T	V _{CE} = 6V, I _C =20mA f =30MHz	150			MHz

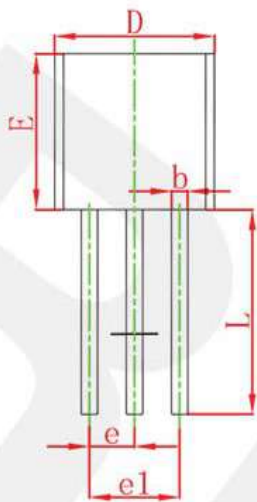
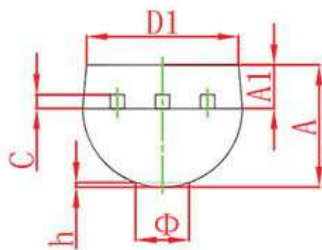
CLASSIFICATION OF h_{FE(1)}

Rank	B	C	D	D3
Range	85-160	120-200	160-300	300-400

Typical Characteristics

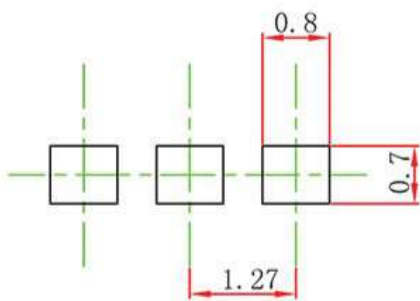


TO-92 Package Outline Dimensions



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 Suggested Pad Layout



Note:

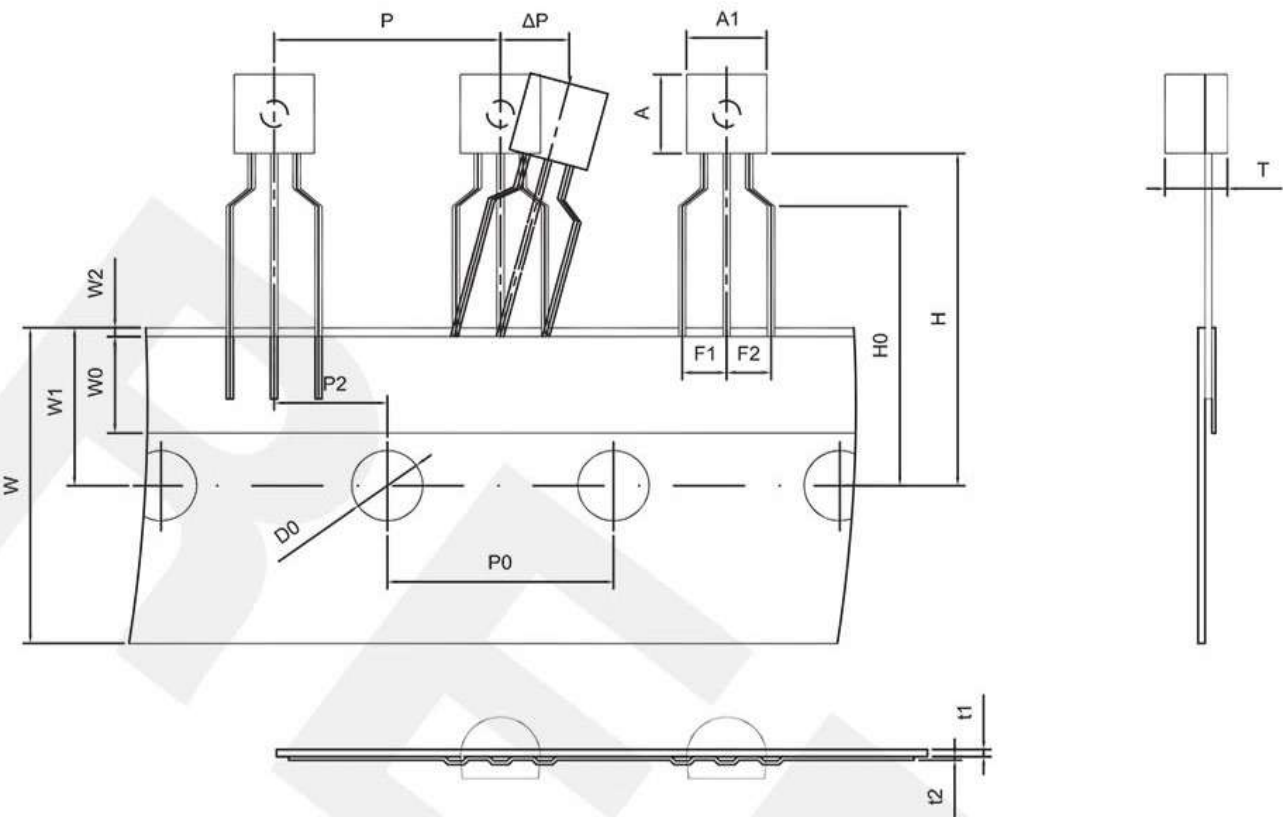
- Controlling dimension: in millimeters.
- General tolerance: ± 0.05mm.
- The pad layout is for reference purposes only.

NOTICE

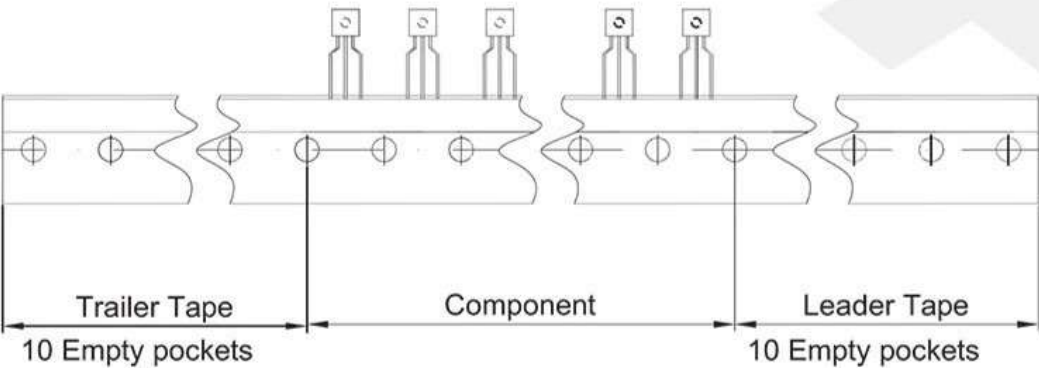
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TO-92 Tape and Reel

TO-92 PACKAGE TAPEING DIMENSION



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



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250