

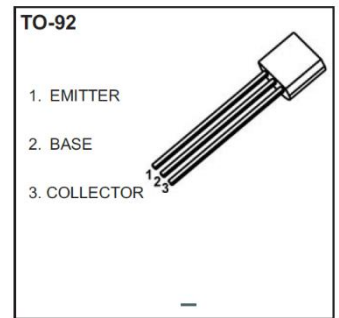


AD-SS8050* series Plastic-Encapsulated Transistor

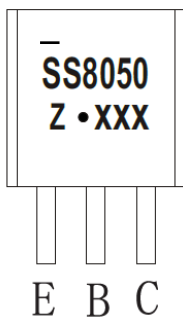
AD-SS8050* series Transistor (NPN)

FEATURES

- Power Dissipation
PCM : 1 W (T_a=25)
- AEC-Q101 qualified

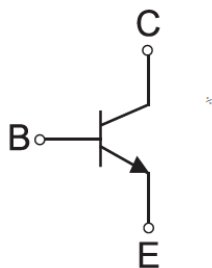


MARKING :



SS8050=Device code
Z = Rank of hFE

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
AD-SS8050	TO-92	Bulk	1000pcs/Bag
AD-SS8050-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-base voltage	V _{CBO}	40	V
Collector-emitter voltage	V _{CEO}	25	V
Emitter-base voltage	V _{EBO}	5	V
Collector continuous current	I _C	1.5	A
Collector power dissipation	P _C	1	W
Thermal resistance from junction to ambient	R _{θJA}	125	°C/W
Operating junction and storage temperature range	T _j , T _{stg}	-55 ~ 150	°C

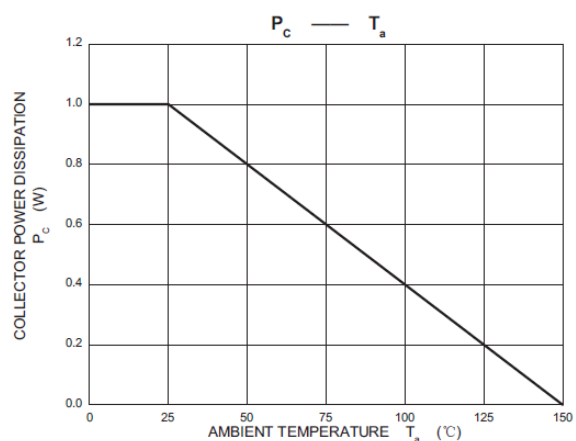
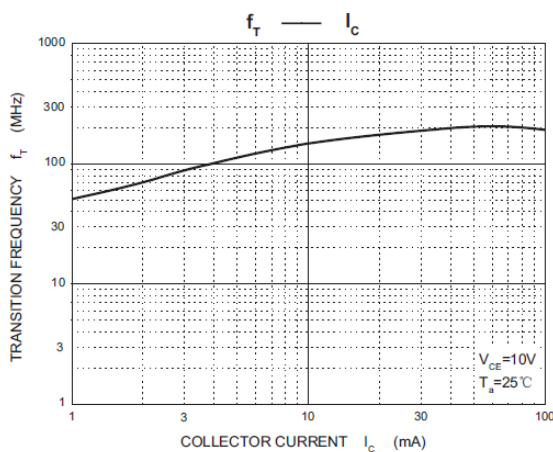
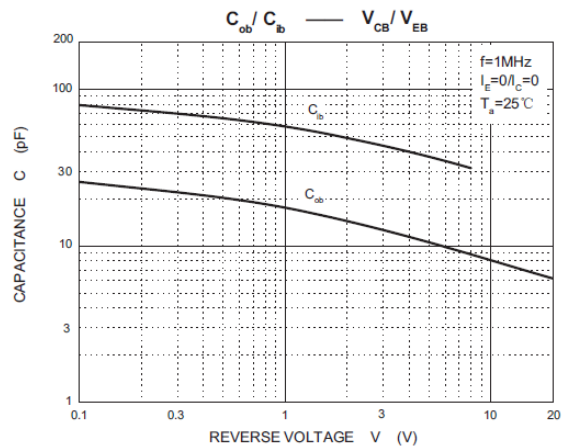
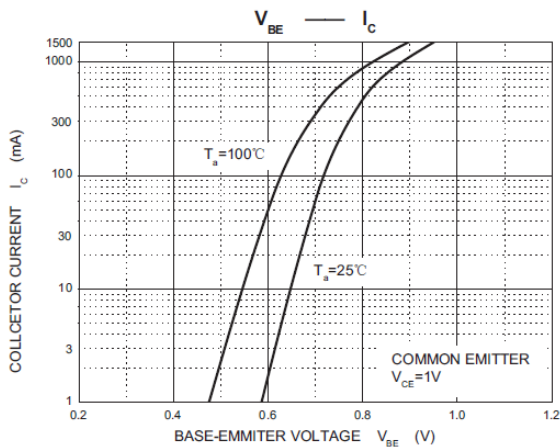
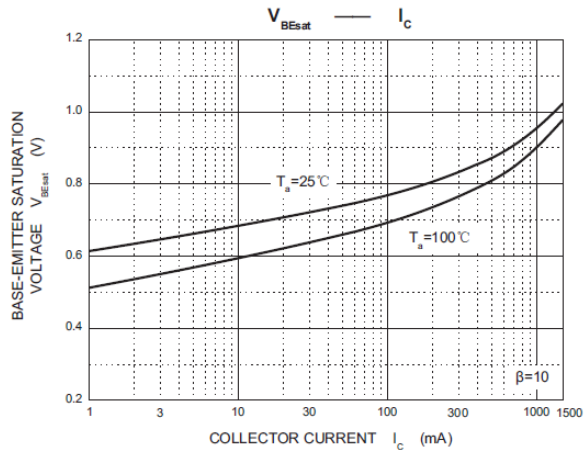
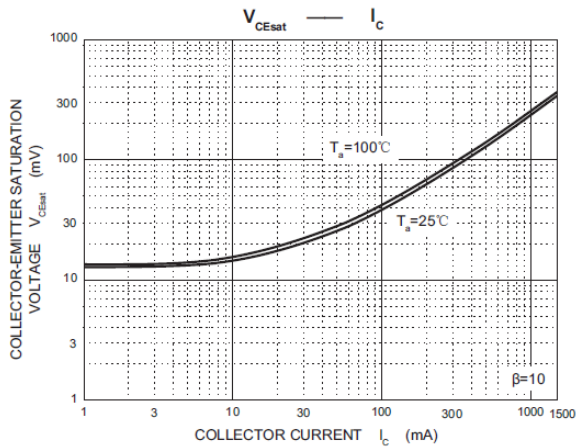
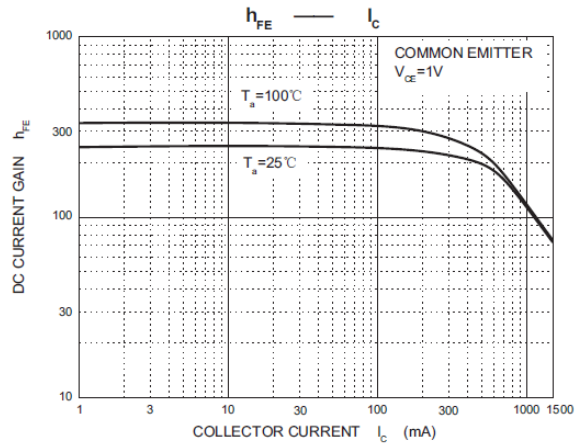
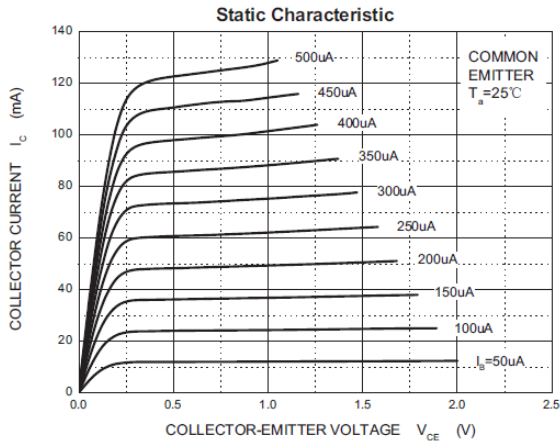
ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 100μA, I _E = 0A	40	-	-	V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 0.1mA, I _B = 0A	25	-	-	V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 100μA, I _C = 0A	5	-	-	V
Collector-base cut-off current	I _{CBO}	V _{CB} = 40V, I _E = 0A	-	-	0.1	μA
Collector cut-off current	I _{CEO}	V _{CE} = 20V, I _B = 0A	-	-	0.1	μA
Emitter-base cut-off current	I _{EBO}	V _{EB} = 5V, I _C = 0A	-	-	0.1	μA
DC current gain	h _{FE(1)}	V _{CE} = 1V, I _C = 100mA	85	-	400	-
	h _{FE(2)}	V _{CE} = 1V, I _C = 800mA	40	-	-	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 800mA, I _B = 80mA	-	-	0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 800mA, I _B = 80mA	-	-	1.2	V
Base-emitter voltage	V _{BE}	V _{CE} = 1V, I _C = 10mA	-	-	1	V
Transition frequency	f _T	V _{CE} = 10V, I _C = 50mA, f = 30MHz	100	-	-	MHz

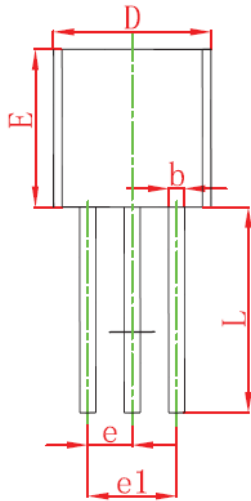
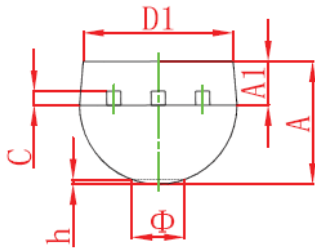
CLASSIFICATION OF h_{FE(1)}

Rank	AD-SS8050-B	AD-SS8050-C	AD-SS8050-D	AD-SS8050-D3
Range	85-160	120-200	160-300	300-400

TYPICAL CHARACTERISTICS

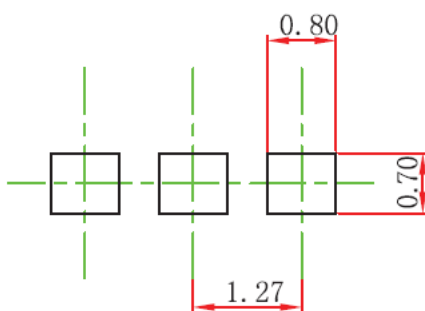


TO-92 PACKAGE OUTLINE DIMENSIONS



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

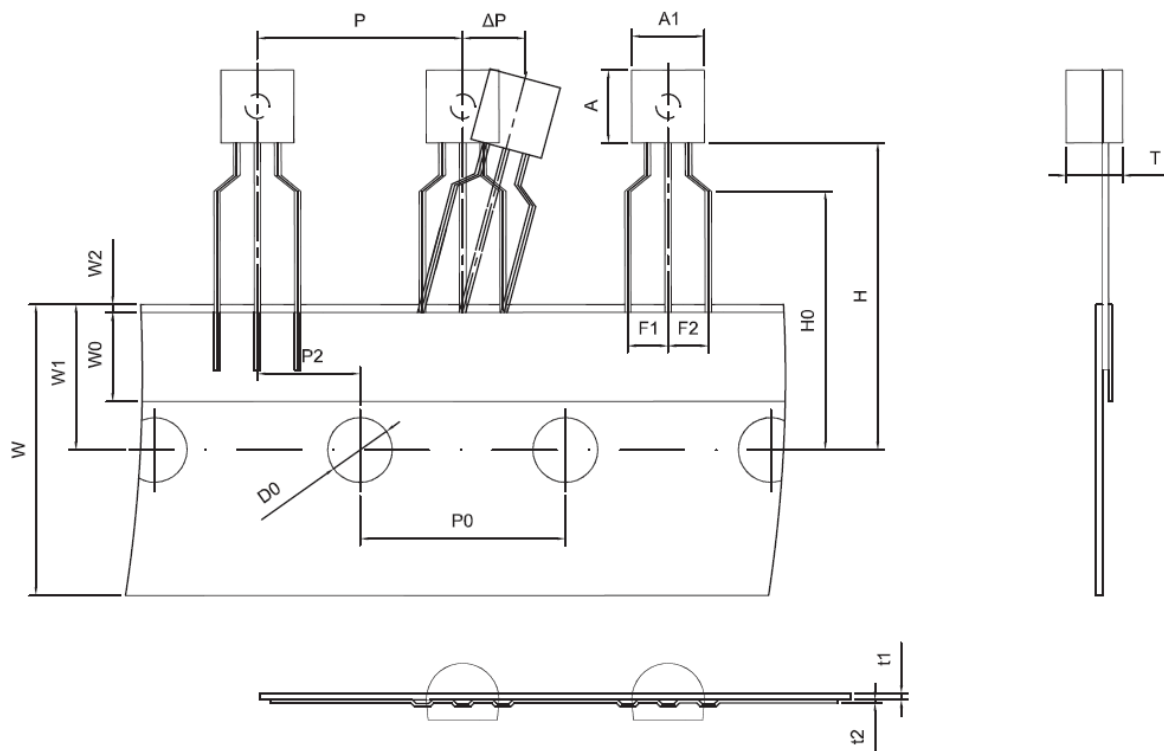
TO-92 SUGGESTED PAD LAYOUT



Note:

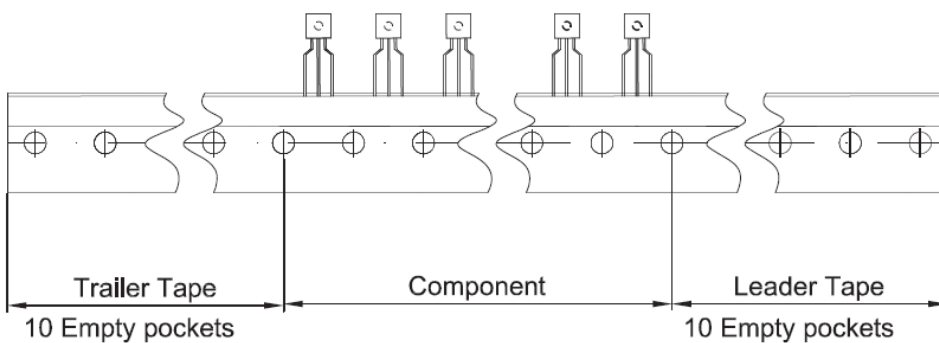
1. Controlling dimension in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purpose only.

TO-92 TAPE AND REEL



Dimensions 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

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