TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

TSB772S

Low Vcesat PNP Transistor

TO-92

Pin Definition:
1. Emitter
2. Collector
3. Base

PRODUCT SUMMARY

BV_{CBO}	-50V
BV_{CEO}	-30V
I_C	-3A
$V_{CE(SAT)}$	-0.5V @ I_C / I_B = -2A / -200mA

Features

- Low $V_{CE(SAT)}$ -0.25 @ I_C / I_B = 2A / 200mA (Typ.)
- Complementary part with TSD882S

Structure

- Epitaxial Planar Type
- PNP Silicon Transistor

Ordering Information

Part No.	Package	Packing
TSB772SCT B0	TO-92	1Kpcs / Bulk
TSB772SCT B0G	TO-92	1Kpcs / Bulk
TSB772SCT A3	TO-92	2Kpcs / Ammo
TSB772SCT A3G	TO-92	2Kpcs / Ammo

Note: "G" denotes for Halogen Free

Absolute Maximum Rating (Ta = 25°C unless otherwise noted)

Parameter		Symbol	Limit	Unit
Collector-Base Voltage		V_{CBO}	-50	V
Collector-Emitter Voltage		V_{CEO}	-30	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-3	A
	Pulse		-7 (note)	
Collector Power Dissipation		P_D	0.625	W
Operating Junction Temperature		T_J	+150	°C
Operating Junction and Storage Temperature Range		T_{STG}	- 55 to +150	°C

Note: Single pulse, Pw≤350us, Duty≤2%

Electrical Specifications (Ta = 25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	I_C = -50uA, I_E = 0	BV_{CBO}	-50	--	--	V
Collector-Emitter Breakdown Voltage	I_C = -1mA, I_B = 0	BV_{CEO}	-30	--	--	V
Emitter-Base Breakdown Voltage	I_E = -50uA, I_C = 0	BV_{EBO}	-5	--	--	V
Collector Cutoff Current	V_{CB} = -30V, I_E = 0	I_{CBO}	--	--	-1	uA
Emitter Cutoff Current	V_{EB} = 3V, I_C = 0	I_{EBO}	--	--	-1	uA
Collector-Emitter Saturation Voltage	I_C / I_B = -2A / -200mA	*$V_{CE(SAT)}$	--	-0.3	-0.5	V
Base-Emitter Saturation Voltage	I_C / I_B = -2A / -200mA	*$V_{BE(SAT)}$	--	-1	-2	V
DC Current Transfer Ratio	V_{CE} = -2V, I_C = -1A	*h_{FE}	100	--	500	
Transition Frequency	V_{CE} =-5V, I_C=-100mA, f=100MHz	f_T	--	80	--	MHz
Output Capacitance	V_{CB} = -10V, f=1MHz	Cob	--	55	--	pF

* Pulse Test: Pulse Width ≤380uS, Duty Cycle≤2%

Electrical Characteristics Curve (Ta = 25°C, unless otherwise noted)

Figure 1. DC Current Gain

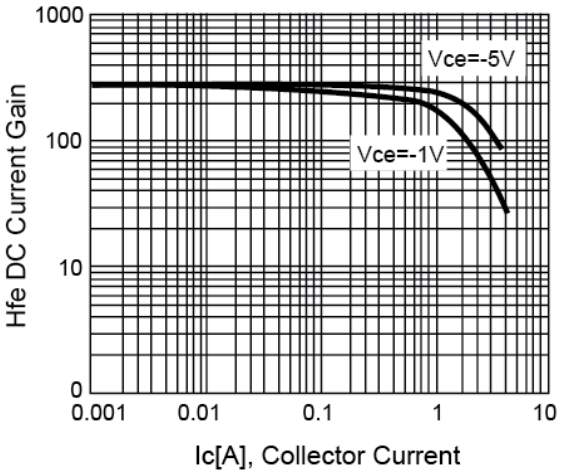


Figure 2. $V_{CE(SAT)}$ v.s. Ic

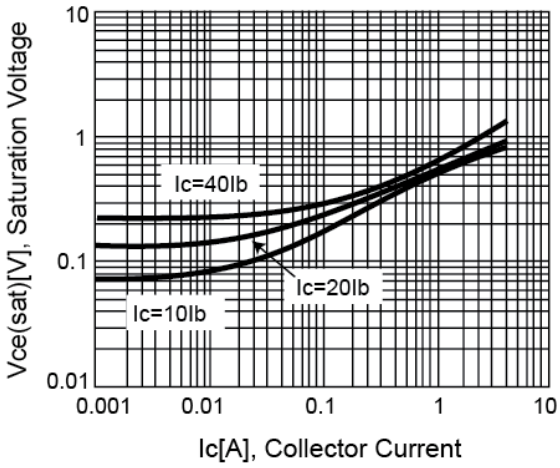


Figure 3. $V_{BE(SAT)}$ v.s. Ic

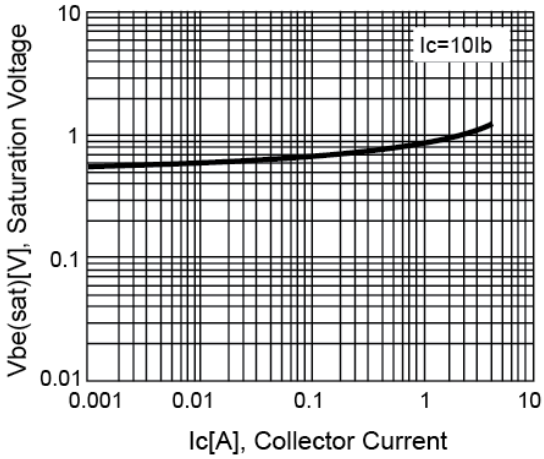
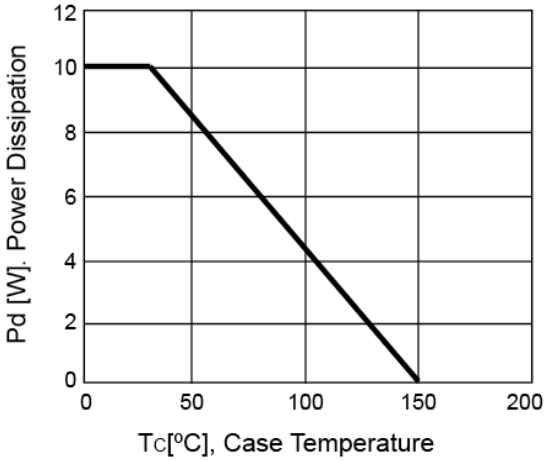


Figure 4. Power Derating Curve



TSB772S

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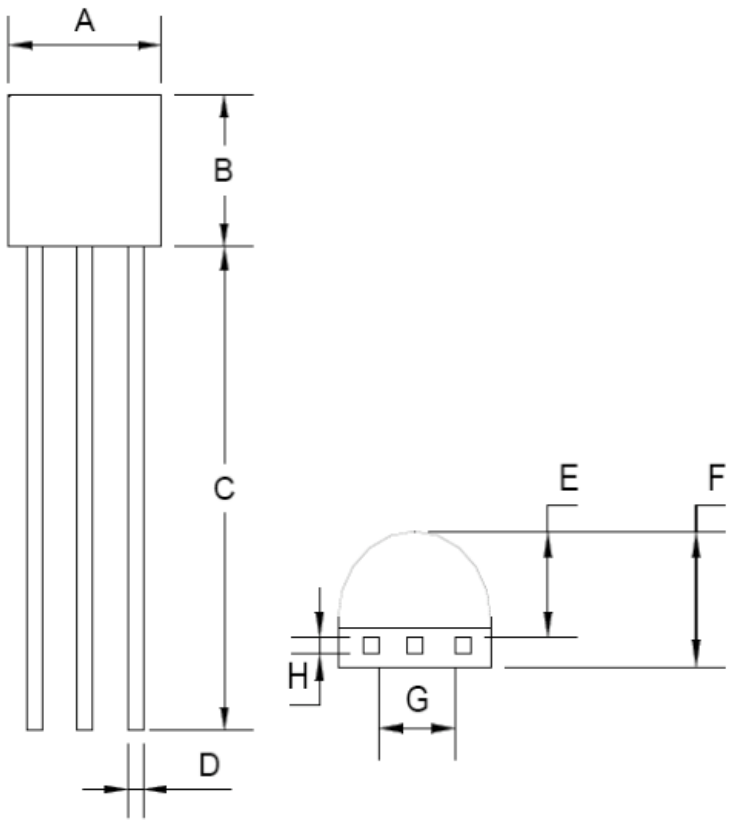
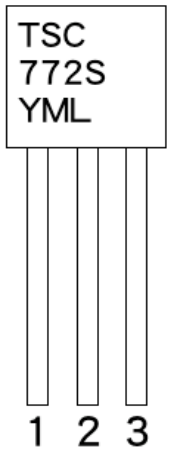
TO-92 Mechanical Drawing



TO-92 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.30	4.70	0.169	0.185
B	4.30	4.70	0.169	0.185
C	14.30(typ)		0.563(typ)	
D	0.43	0.49	0.017	0.019
E	2.19	2.81	0.086	0.111
F	3.30	3.70	0.130	0.146
G	2.42	2.66	0.095	0.105
H	0.37	0.43	0.015	0.017

Marking Diagram



Y = Year Code
M = Month Code
(**A**=Jan, **B**=Feb, **C**=Mar, **D**=Apl, **E**=May, **F**=Jun, **G**=Jul, **H**=Aug, **I**=Sep, **J**=Oct, **K**=Nov, **L**=Dec)
= Month Code for Halogen Free Product
(**O**=Jan, **P**=Feb, **Q**=Mar, **R**=Apl, **S**=May, **T**=Jun, **U**=Jul, **V**=Aug, **W**=Sep, **X**=Oct, **Y**=Nov, **Z**=Dec)
L = Lot Code

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