



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	-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, $P_w \leq 350\mu s$, Duty $\leq 2\%$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$I_C = -50\mu A, I_E = 0$	BV_{CBO}	-50	--	--	V
Collector-Emitter Breakdown Voltage	$I_C = -1mA, I_B = 0$	BV_{CEO}	-30	--	--	V
Emitter-Base Breakdown Voltage	$I_E = -50\mu A, I_C = 0$	BV_{EBO}	-5	--	--	V
Collector Cutoff Current	$V_{CB} = -30V, I_E = 0$	I_{CBO}	--	--	-1	μA
Emitter Cutoff Current	$V_{EB} = 3V, I_C = 0$	I_{EBO}	--	--	-1	μA
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	$V_{CB} = -10V, f = 1MHz$	C_{ob}	--	55	--	pF

* Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Electrical Characteristics Curve ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Figure 1. DC Current Gain

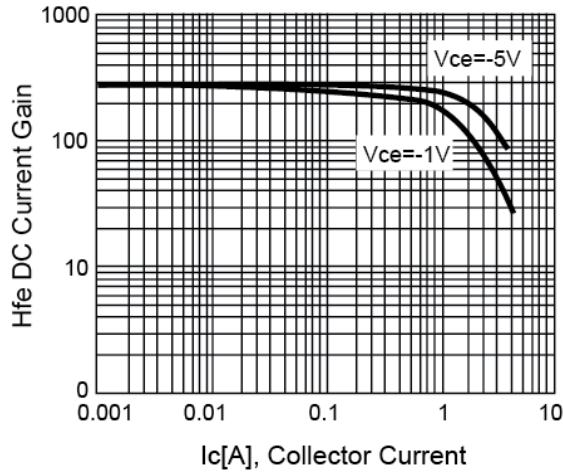


Figure 2. $V_{CE(SAT)}$ v.s. I_c

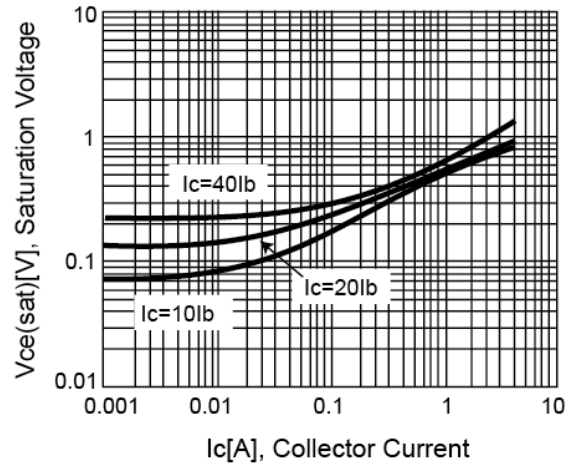


Figure 3. $V_{BE(SAT)}$ v.s. I_c

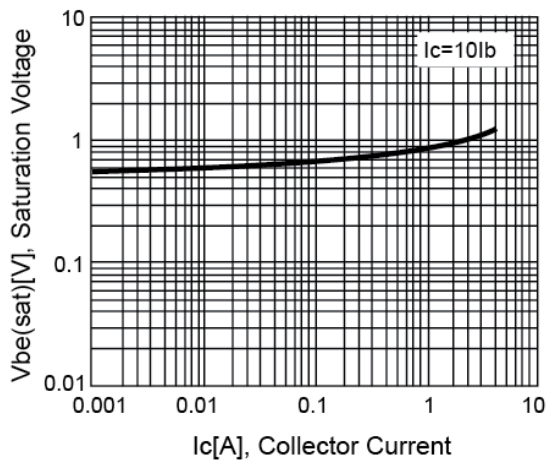
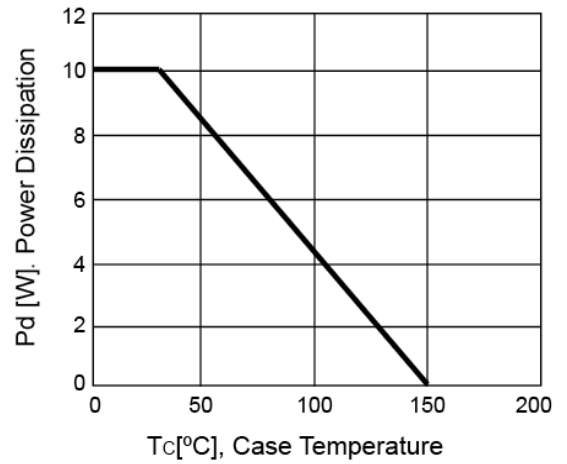
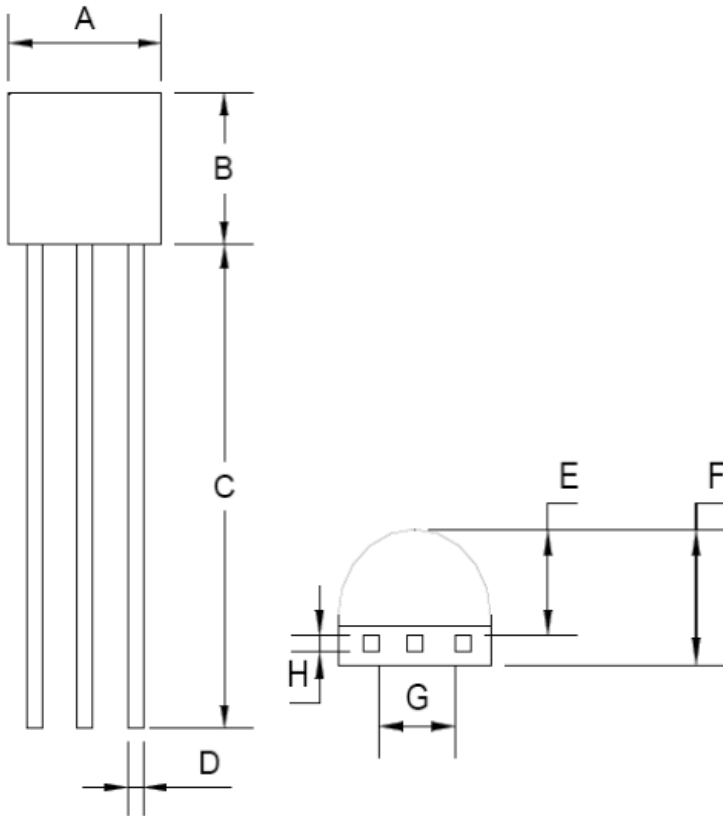


Figure 4. Power Derating Curve

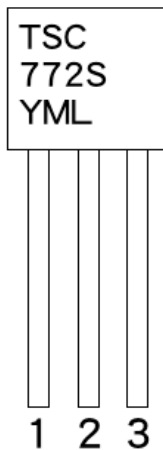


TO-92 Mechanical Drawing



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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