



TO-92



Pin Definition:

1. Emitter
2. Collector
3. Base

SOT-89



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1. Base
2. Collector
3. Emitter

PRODUCT SUMMARY

BV_{CBO}	-50V
BV_{CEO}	-50V
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
TSD772SCT B0	TO-92	1Kpcs / Bulk
TSD772SCT A3	TO-92	2Kpcs / Ammo
TSD772SCY RM	SOT-89	1Kpcs / 7" Reel

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}	-50	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	DC	-3	A
	Pulse	-7 (note)	
Collector Power Dissipation	SOT-89	0.75	W
	TO-92	0.625	
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}	-50	--	--	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

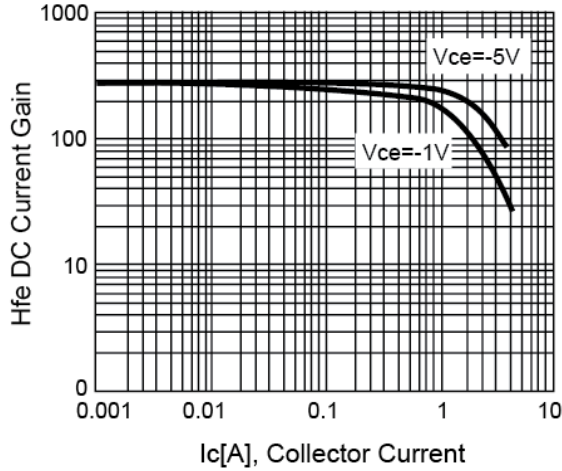


Figure 2. V_{CE(SAT)} v.s. Ic

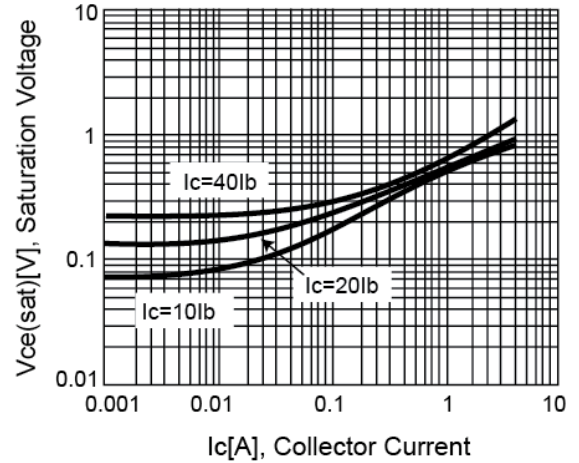


Figure 3. V_{BE(SAT)} v.s. Ic

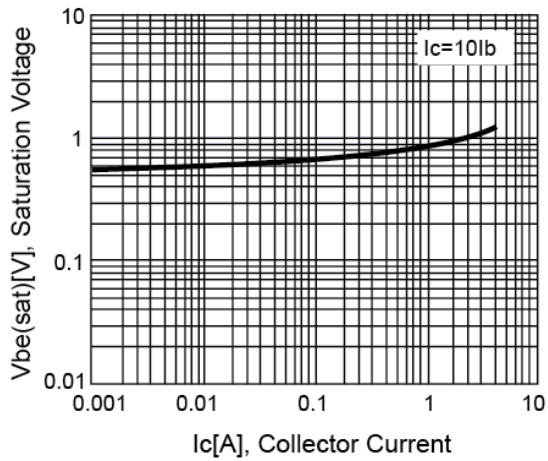
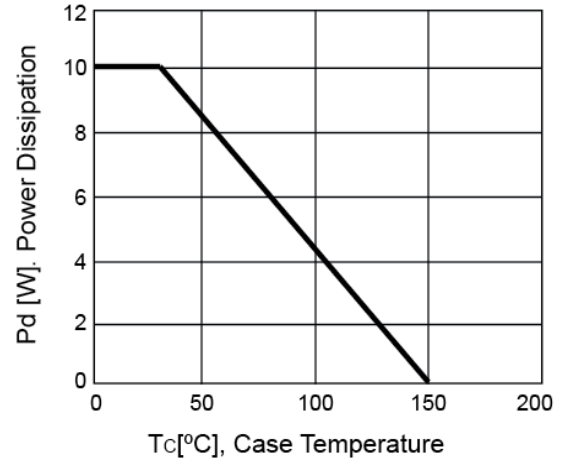
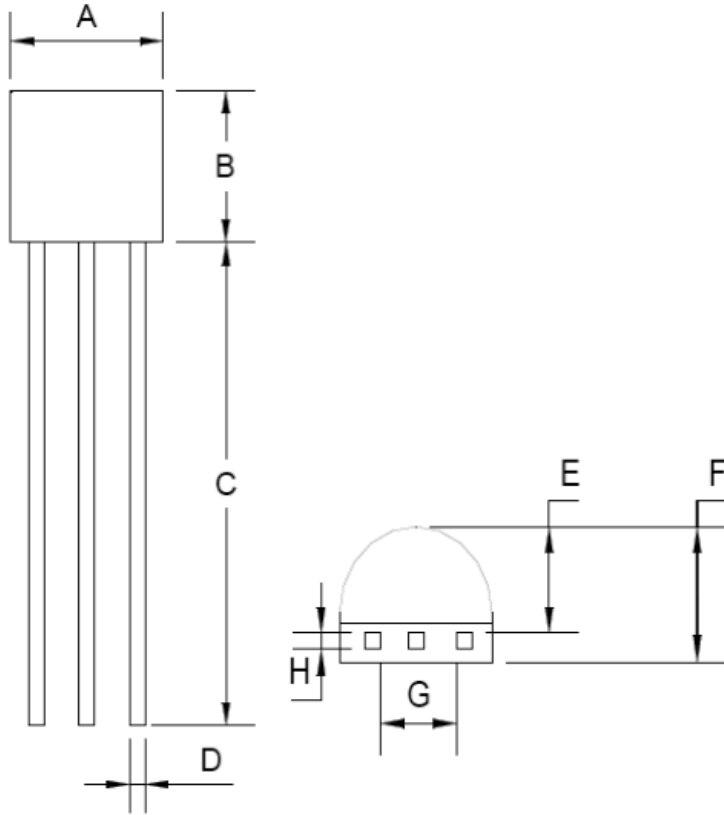


Figure 4. Power Derating Curve

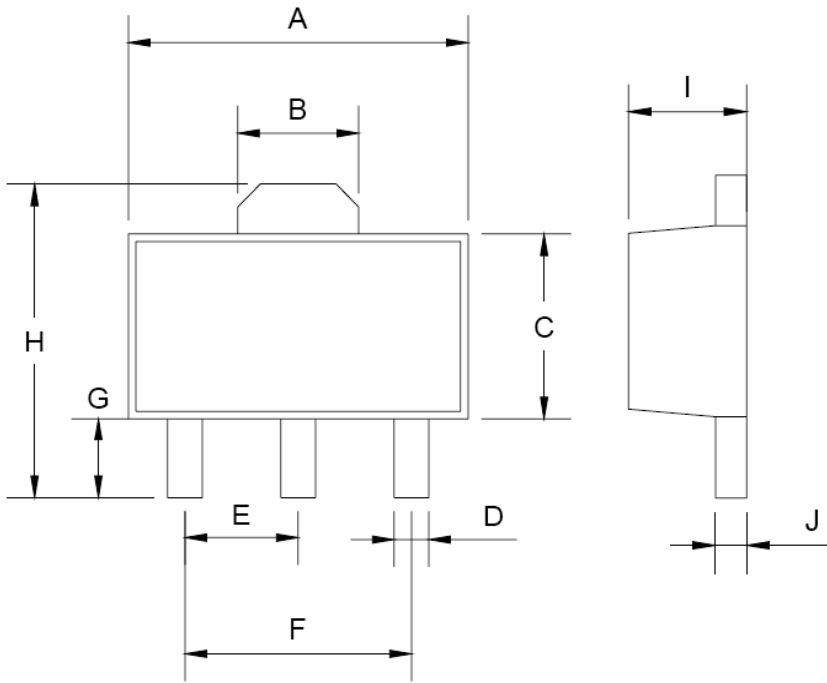


TO-92 Mechanical Drawing



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

SOT-89 Mechanical Drawing



SOT-89 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.40	4.60	0.173	0.181
B	1.50	1.7	0.059	0.070
C	2.30	2.60	0.090	0.102
D	0.40	0.52	0.016	0.020
E	1.50	1.50	0.059	0.059
F	3.00	3.00	0.118	0.118
G	0.89	1.20	0.035	0.047
H	4.05	4.25	0.159	0.167
I	1.4	1.6	0.055	0.068
J	0.35	0.44	0.014	0.017

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