

SOT-23

Pin Definition:

1. Base
2. Emitter
3. Collector

PRODUCT SUMMARY

BV_{CBO}	-500V
BV_{CEO}	-500V
I_C	-150mA
V_{CE(SAT)}	-0.5V @ I _C / I _B = -50mA / -10mA

Features

- Low Saturation Voltages
- Excellent gain characteristics specified up to -50mA

Structure

- Epitaxial Planar Type
- PNP Silicon Transistor

Ordering Information

Part No.	Package	Packing
TSA884CX RFG	SOT-23	3Kpcs / 7" Reel

Note: "G" denotes for Halogen Free

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V _{CBO}	-500	V
Collector-Emitter Voltage	V _{CEO}	-500	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	DC	-150	mA
	Pulse	-500	
Total Power Dissipation	P _{TOT}	0.3	W
Operating Junction Temperature	T _J	+150	°C
Operating Junction and Storage Temperature Range	T _{STG}	- 55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	I _C = -100uA, I _E = 0	BV _{CBO}	-500	--	--	V
Collector-Emitter Breakdown Voltage	I _C = -10mA, I _B = 0	BV _{CEO}	-500	--	--	V
Emitter-Base Breakdown Voltage	I _E = -100uA, I _C = 0	BV _{EBO}	-5	--	--	V
Collector Cutoff Current	V _{CB} = 120V, I _E = 0	I _{CBO}	--	--	-100	nA
Emitter Cutoff Current	V _{EB} = 6V, I _C = 0	I _{EBO}	--	--	-100	nA
Collector-Emitter Saturation Voltage	I _C = -20mA, I _B = -2mA	V _{CE(SAT)} 1	--	--	-0.2	V
	I _C = -50mA, I _B = -10mA	V _{CE(SAT)} 2	--	--	-0.5	
Base-Emitter Saturation Voltage	I _C = -50mA, I _B = -10mA	V _{BE(SAT)}	--	--	-0.9	V
Base-Emitter on Voltage	V _{CE} = -10V, I _C = -50mA	V _{BE(ON)}	--	--	-0.9	V
DC Current Transfer Ratio	V _{CE} = -10V, I _C = -1mA	h _{FE} 1	150	--	300	
	V _{CE} = -10V, I _C = -50mA	h _{FE} 2	80	--	300	
	V _{CE} = -10V, I _C = -100mA	h _{FE} 3	--	15	--	
Transition Frequency	V _{CE} = 10V, I _C = -100mA	f _T	--	50	--	MHz
Output Capacitance	V _{CB} = 20V, f = 1MHz	Cob	--	--	8	pF
Turn On Time	V _{CE} = -100V, I _C = -50mA	Ton	--	110	--	nS
Turn Off Time	I _{B1} = -5mA, I _{B2} = -10mA	Toff	--	1500	--	nS

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

Figure 1. Static Characteristics

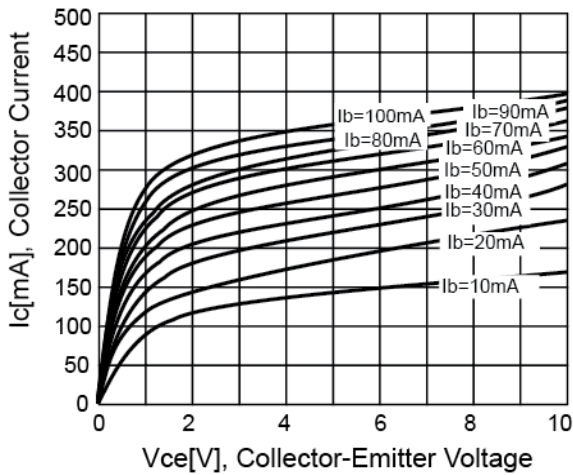


Figure 2. DC Current Gain

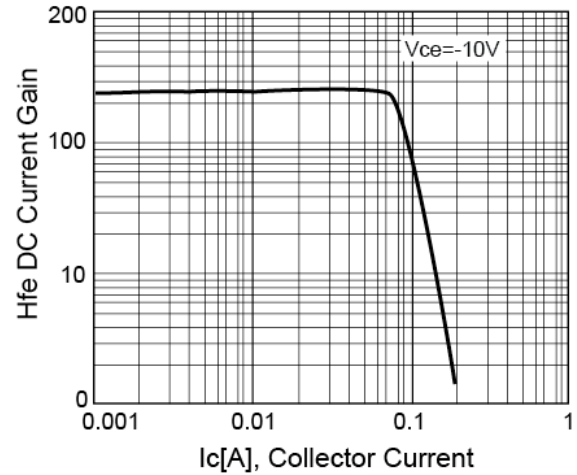


Figure 3. $V_{CE(SAT)}$ v.s. $V_{BE(SAT)}$

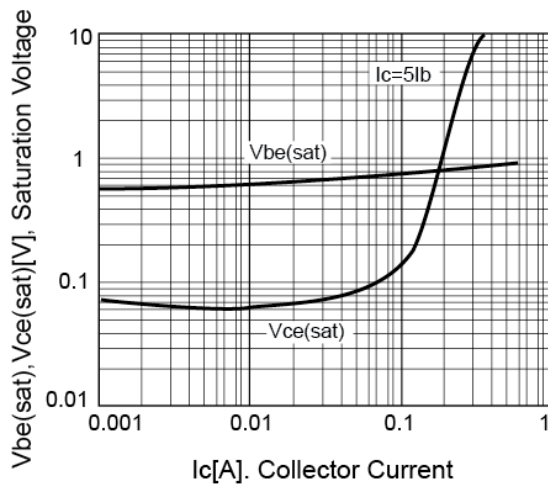
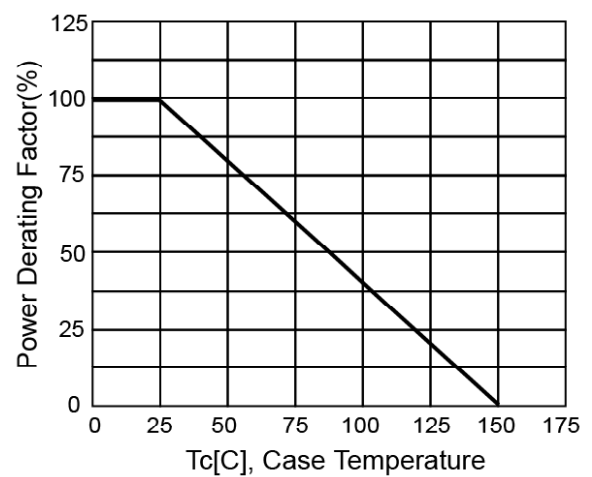
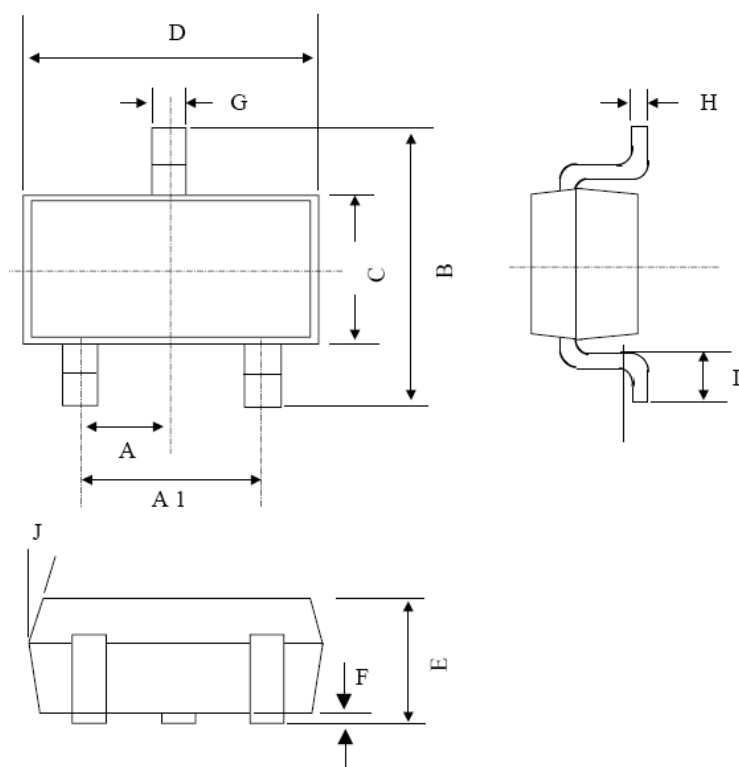


Figure 4. Power Derating

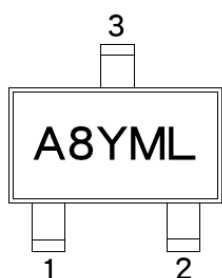


SOT-23 Mechanical Drawing



SOT-23 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX.
A	0.95 BSC		0.037 BSC	
A1	1.9 BSC		0.074 BSC	
B	2.60	3.00	0.102	0.118
C	1.40	1.70	0.055	0.067
D	2.80	3.10	0.110	0.122
E	1.00	1.30	0.039	0.051
F	0.00	0.10	0.000	0.004
G	0.35	0.50	0.014	0.020
H	0.10	0.20	0.004	0.008
I	0.30	0.60	0.012	0.024
J	5°	10°	5°	10°

Marking Diagram



- A8** = Device Code
Y = Year Code
M = Month Code for Halogen Free Product
 O =Jan **P** =Feb **Q** =Mar **R** =Apr
 S =May **T** =Jun **U** =Jul **V** =Aug
 W =Sep **X** =Oct **Y** =Nov **Z** =Dec
L = Lot Code

TSA884

PNP Silicon Planar High Voltage Transistor

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