

SOT-23



Pin Definition:

1. Base
2. Emitter
3. Collector

PRODUCT SUMMARY

BV_{CBO}	-60V
BV_{CEO}	-60V
I_C	-0.6A
$V_{CE(SAT)}$	-0.4V @ $I_C / I_B = -150mA / -15mA$

Features

- Low $V_{CE(SAT)}$ -0.4 @ $I_C / I_B = -150mA / -15mA$
- Complementary part with TSC2411

Structure

- Epitaxial Planar Type
- PNP Silicon Transistor

Ordering Information

Part No.	Package	Packing
TSA1036CX RF	SOT-23	3Kpcs / 7" Reel

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-0.6	A
Collector Power Dissipation	P_D	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/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	$I_C = -10\mu A, I_E = 0$	BV_{CBO}	-60	--	--	V
Collector-Emitter Breakdown Voltage	$I_C = -10mA, I_B = 0$	BV_{CEO}	-60	--	--	V
Emitter-Base Breakdown Voltage	$I_E = -10\mu A, I_C = 0$	BV_{EBO}	-5	--	--	V
Collector Cutoff Current	$V_{CB} = -50V, I_E = 0$	I_{CBO}	--	--	-10	nA
Emitter Cutoff Current	$V_{EB} = -0.5V, I_C = 0$	I_{EBO}	--	--	-50	nA
Collector-Emitter Saturation Voltage	$I_C / I_B = -150mA / -15mA$	$*V_{CE(SAT)}$	--	--	-0.4	V
Base-Emitter Saturation Voltage	$I_C / I_B = -500mA / -50mA$	$*V_{BE(SAT)}$	--	--	-1.3	V
DC Current Transfer Ratio	$V_{CE} = -10V, I_C = -0.1A$	$*h_{FE1}$	75	--	--	
	$V_{CE} = -10V, I_C = -150mA$	$*h_{FE2}$	100	--	300	
Transition Frequency	$V_{CE} = -5V, I_C = -50mA, f = 100MHz$	f_T	200	--	--	MHz
Output Capacitance	$V_{CB} = -10V, f = 1MHz$	C_{ob}	--	--	8	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

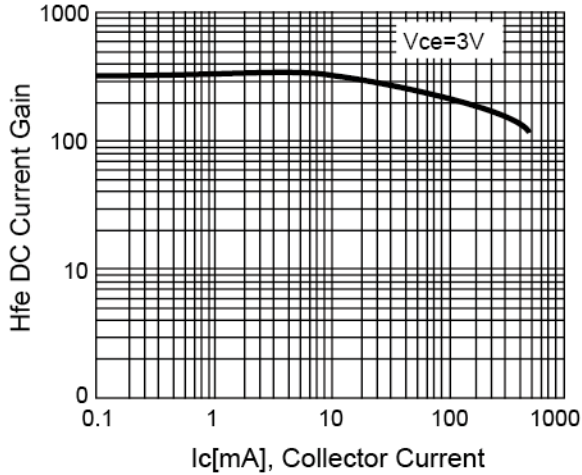


Figure 2. $V_{CE(SAT)}$ v.s. I_c

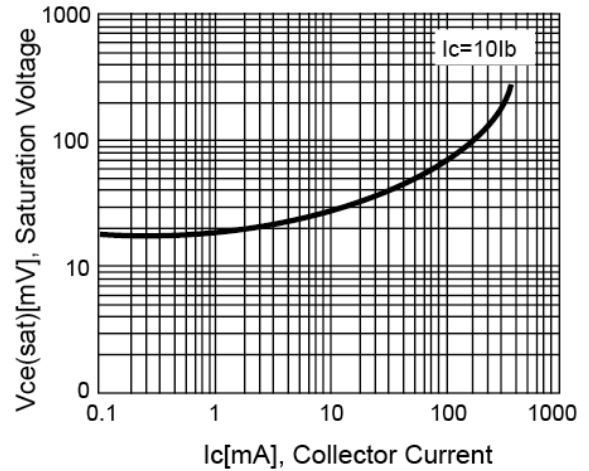


Figure 3. $V_{BE(SAT)}$ v.s. I_c

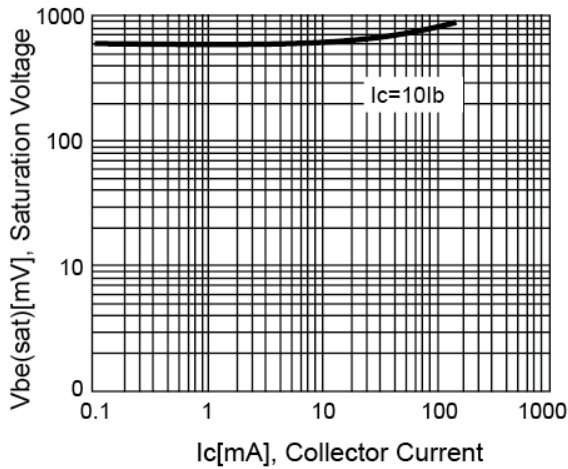


Figure 4. Cutoff Frequency vs. I_c

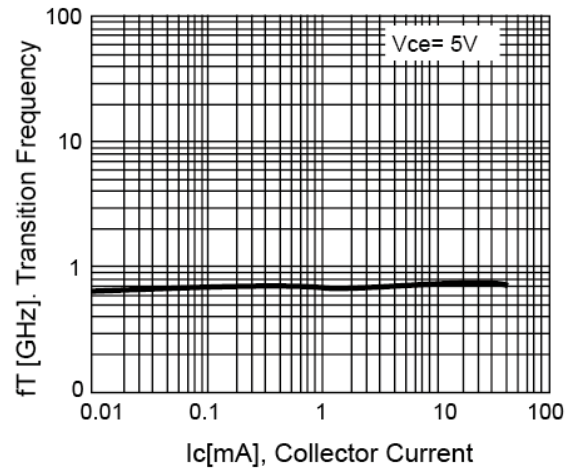
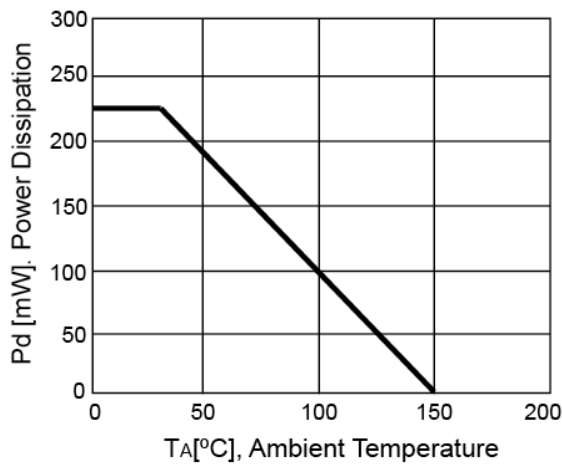
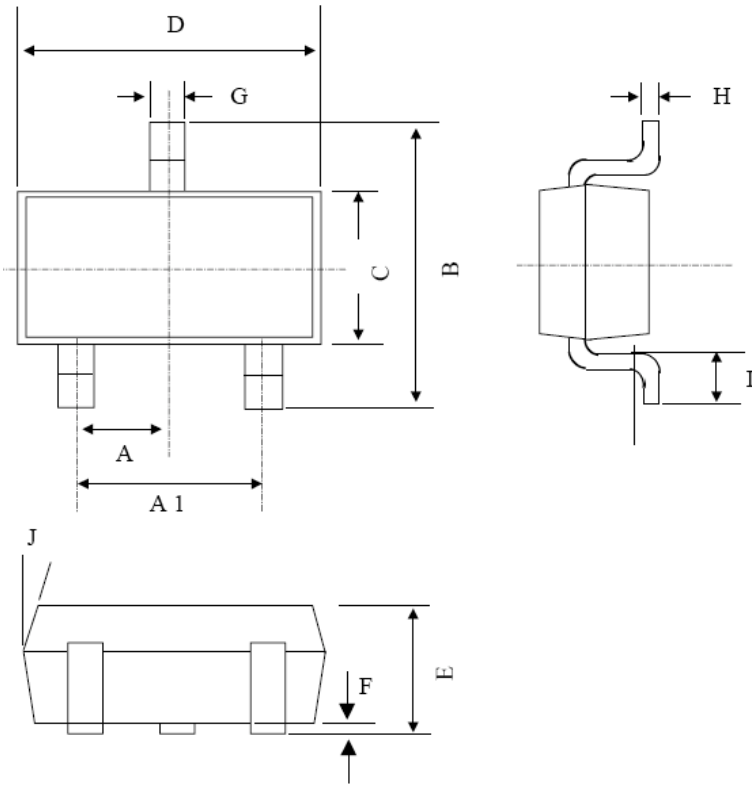


Figure 5. Power Derating Curve



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°

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