TSA1036

General Purpose PNP Transistor

SOT-23

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

BV_{CEO} = - 32V

Ic = - 600mA

$V_{CE\ (SAT)}$, = 0.2V(typ.) @Ic / Ib = 300mA / 30mA

Features

- ✧ Driver stage of AF amplifier
- ✧ General purpose switching application

Structure

- ✧ Epitaxial planar type.
- ✧ Complementary to TSC2411CX

Ordering Information

Part No.	Packing	Package	Marking
TSA1036CX	3kpcs / Reel	SOT-23	2T

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	- 40V	V
Collector-Emitter Voltage	V_{CEO}	- 32V	V
Emitter-Base Voltage	V_{EBO}	- 5	V
Collector Current	I_C	- 0.6	A
Collector Power Dissipation	P_D	225	mW
Operating Junction Temperature	T_J	+150	°C
Operating Junction and Storage Temperature Range	T_{STG}	- 55 to +150	°C

Note: 1. Single pulse, Pw = 380uS, Duty <= 2%

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Static						
Collector-Base Voltage	I_C = - 10uA, I_E = 0	BV_{CBO}	- 40	- 100	--	V
Collector-Emitter Breakdown Voltage	I_C = - 1mA, I_B = 0	BV_{CEO}	- 32	- 60	--	V
Emitter-Base Breakdown Voltage	I_E = - 100uA, I_C = 0	BV_{EBO}	- 5	--	--	V
Collector Cutoff Current	V_{CB} = - 20V, I_E = 0	I_{CBO}	--	--	- 1.0	uA
Emitter Cutoff Current	V_{EB} = - 4V, I_C = 0	I_{EBO}	--	--	- 1.0	uA
Collector-Emitter Saturation Voltage	I_C / I_B = - 100mA / - 10mA	$V_{CE(SAT)1}$	--	--	- 0.5	V
Collector-Emitter Saturation Voltage	I_C / I_B = - 300mA / - 30mA	$V_{CE(SAT)2}$	--	- 0.20	- 0.75	V
DC Current Transfer Ratio	V_{CE} = - 3V, I_C = 100mA	h_{FE}	82	--	390	
Transition Frequency	V_{CE} = - 10V, I_C= - 1mA, f=100MHz	f_T	--	200	--	MHz
Output Capacitance	V_{CB} = - 10V, f=1MHz	Cob	--	7	--	pF

Note : pulse test: pulse width <=380uS, duty cycle <=2%

Classification Of h_{FE}

Rank	P	Q	R	
Range	82 - 180	120 - 270	180 - 390	

Electrical Characteristics Curve

Figure 1. Current Gain vs Collector Current

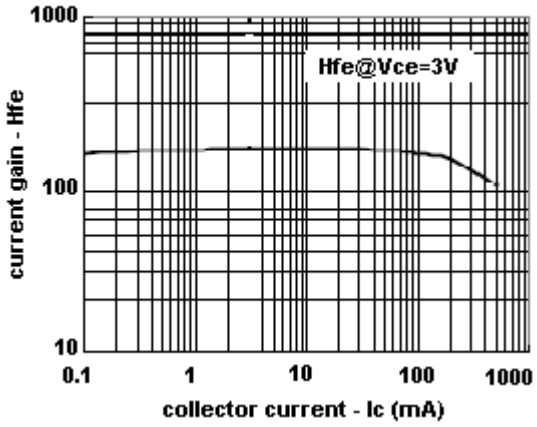


Figure 2. Saturation Voltage vs Collector Current

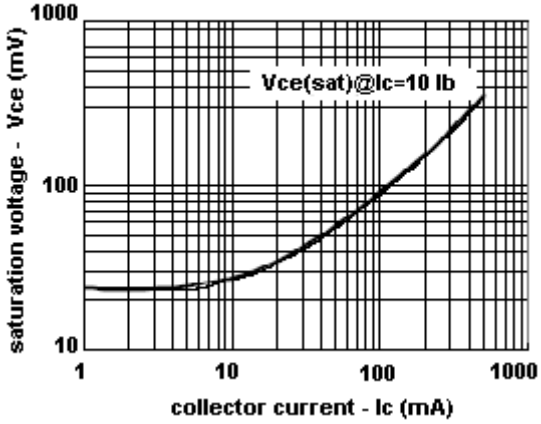


Figure 3. Saturation Voltage vs Collector Current

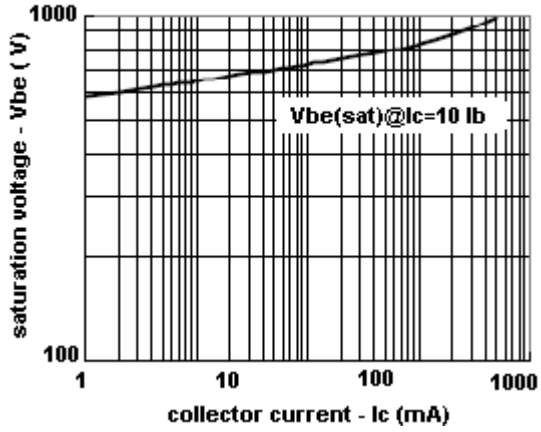


Figure 4. Power Derating Curves

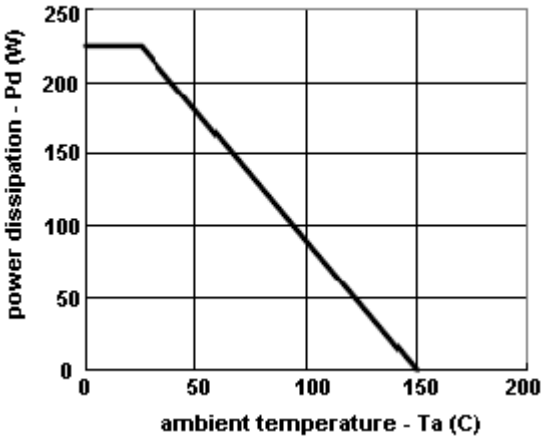
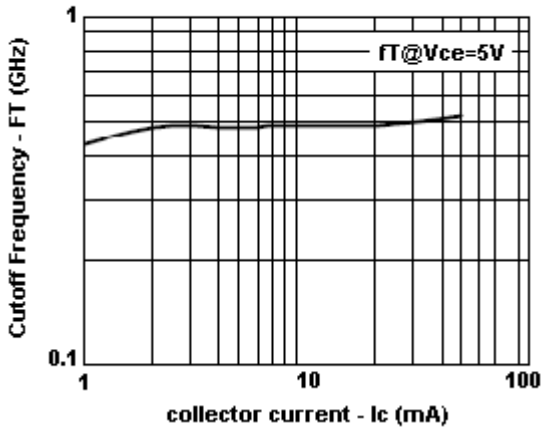
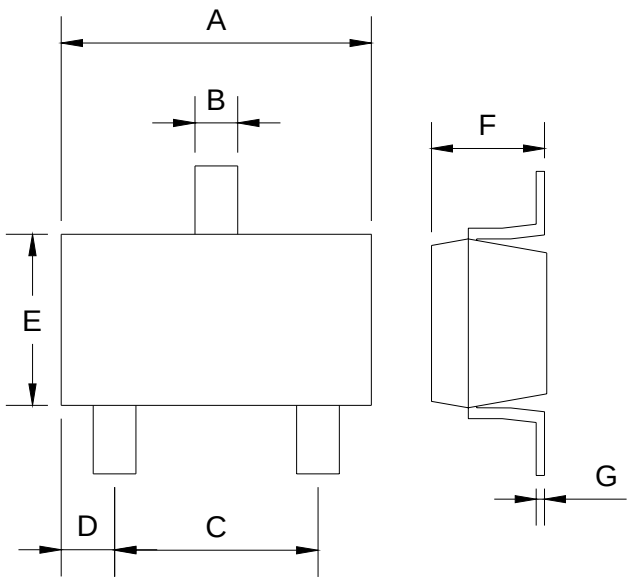


Figure 5. Cutoff Frequency vs Collector Current



SOT-23 Mechanical Drawing



SOT-23 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.110	0.120
B	0.30	0.50	0.012	0.020
C	1.70	2.30	0.067	0.091
D	0.25	0.65	0.010	0.026
E	1.2	1.60	0.047	0.063
F	0.89	1.30	0.035	0.051
G	0.08	0.17	0.003	0.006