



TSA1036

General Purpose PNP Transistor

SOT-23



Pin assignment:

1. Base
2. Emitter
3. Collector

$BV_{CEO} = - 32V$

$I_C = - 600mA$

$V_{CE(SAT)} = 0.2V(\text{typ.}) @ I_C / I_B = 300mA / 30mA$

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, $P_w = 380\mu S$, Duty $\leq 2\%$

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

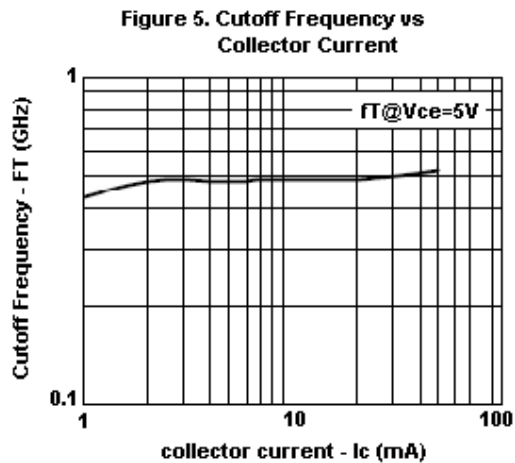
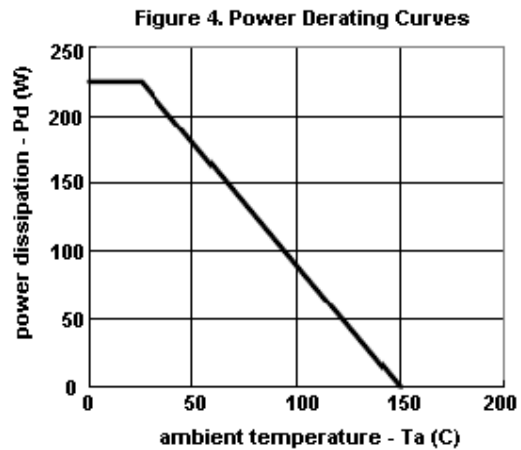
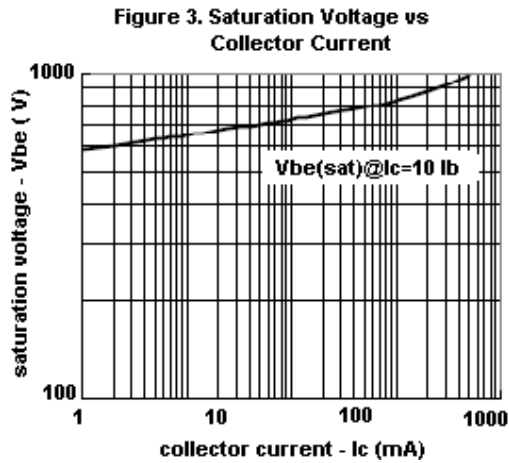
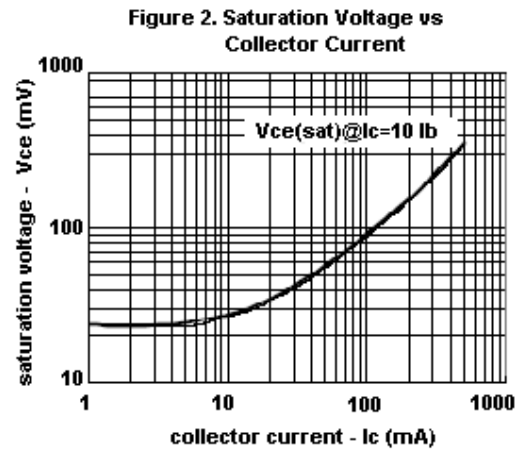
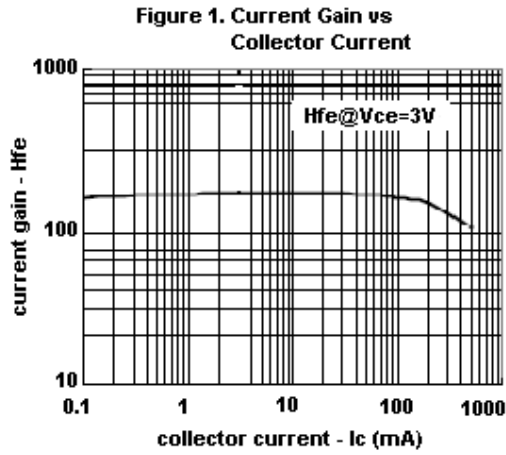
Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Static						
Collector-Base Voltage	$I_C = - 10\mu A, I_E = 0$	BV_{CBO}	- 40	- 100	--	V
Collector-Emitter Breakdown Voltage	$I_C = - 1mA, I_B = 0$	BV_{CEO}	- 32	- 60	--	V
Emitter-Base Breakdown Voltage	$I_E = - 100\mu A, I_C = 0$	BV_{EBO}	- 5	--	--	V
Collector Cutoff Current	$V_{CB} = - 20V, I_E = 0$	I_{CBO}	--	--	- 1.0	μA
Emitter Cutoff Current	$V_{EB} = - 4V, I_C = 0$	I_{EBO}	--	--	- 1.0	μA
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	$V_{CB} = - 10V, f = 1MHz$	C_{ob}	--	7	--	pF

Note : pulse test: pulse width $\leq 380\mu S$, duty cycle $\leq 2\%$

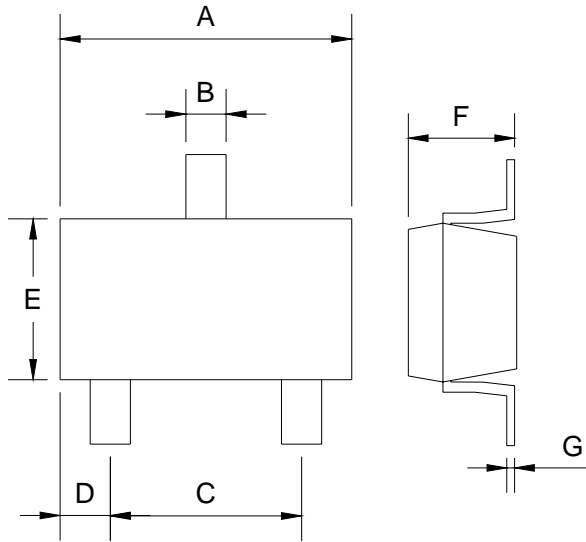
Classification Of h_{FE}

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

Electrical Characteristics Curve



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