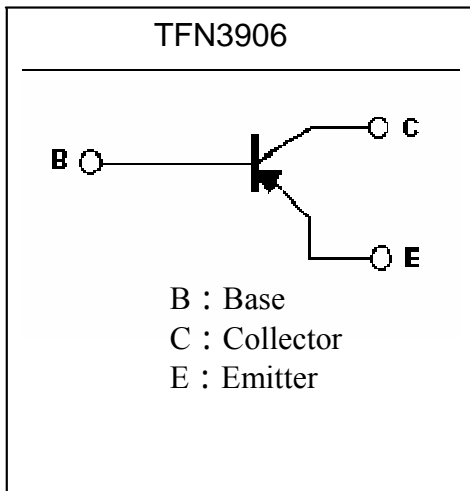


TFN3906

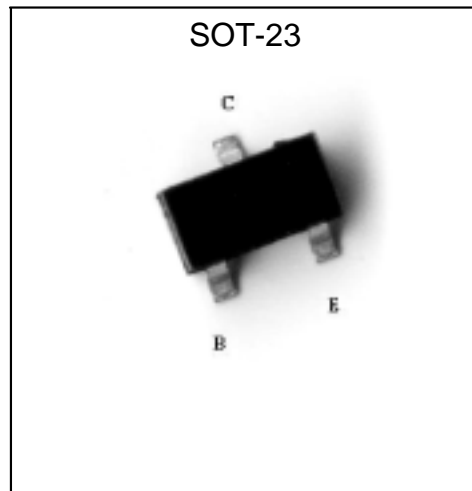
Description

- Complementary to TFN3904.

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V _{CB0}	-40	V
Collector-Emitter Voltage	V _{CE0}	-40	V
Emitter-Base Voltage	V _{EB0}	-5	V
Collector Current	I _C	-200	mA
Power Dissipation (T _A =25°C)	P _D	225 (Note)	mW
Power Dissipation (T _C =25°C)	P _D	560	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	556 (Note)	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	223	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

Note : Free air condition



Characteristics (Ta=25°C)

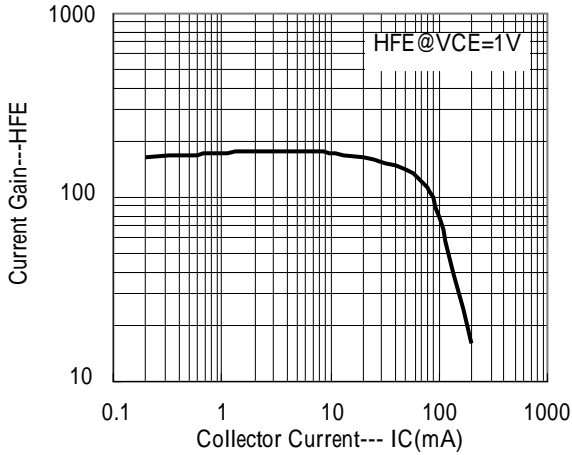
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-40	-	-	V	$I_C=-10\mu A$
BV_{CEO}	-40	-	-	V	$I_C=-1mA$
BV_{EBO}	-5	-	-	V	$I_E=-10\mu A$
I_{CEX}	-	-	-50	nA	$V_{CE}=-30V, V_{BE}=3V$
I_{EBO}	-	-	-50	nA	$V_{EB}=-4V$
* $V_{CE(sat)}$	-	-0.05	-0.25	V	$I_C=-10mA, I_B=-1mA$
* $V_{CE(sat)}$	-	-0.12	-0.4	V	$I_C=-50mA, I_B=-5mA$
* $V_{BE(sat)}$	-0.65	-0.76	-0.85	V	$I_C=-10mA, I_B=-1mA$
* $V_{BE(sat)}$	-	-0.88	-0.95	V	$I_C=-50mA, I_B=-5mA$
* h_{FE}	60	-	-		$V_{CE}=-1V, I_C=-100\mu A$
* h_{FE}	80	-	-		$V_{CE}=-1V, I_C=-1mA$
* h_{FE}	100	-	300		$V_{CE}=-1V, I_C=-10mA$
* h_{FE}	60	-	-		$V_{CE}=-1V, I_C=-50mA$
* h_{FE}	30	-	-		$V_{CE}=-1V, I_C=-100mA$
f_T	250	-	-	MHz	$V_{CE}=-20V, I_C=-10mA, f=100MHz$
Cob	-	-	4.5	pF	$V_{CB}=-5V, I_E=0A, f=1MHz$

*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

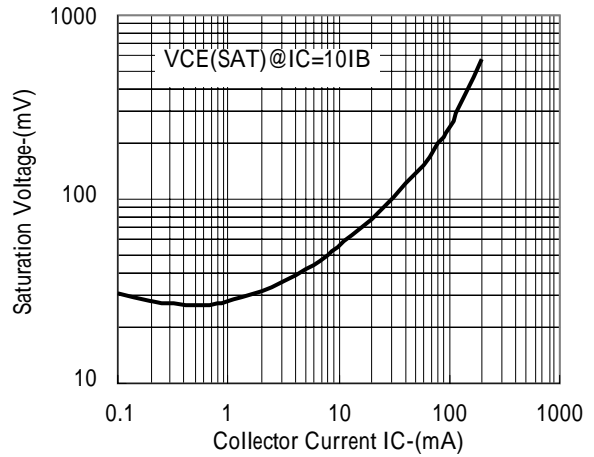


Characteristic Curves

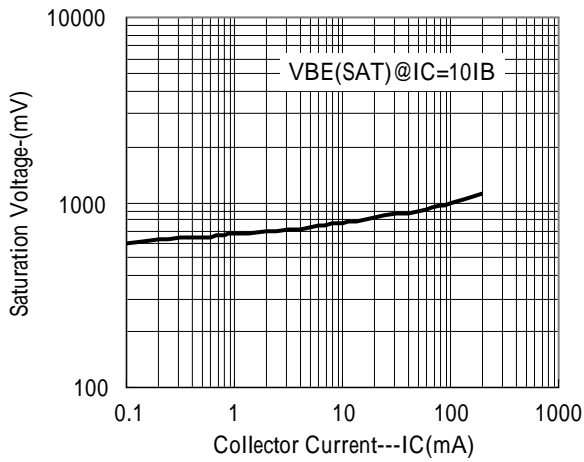
Current Gain vs Collector Current



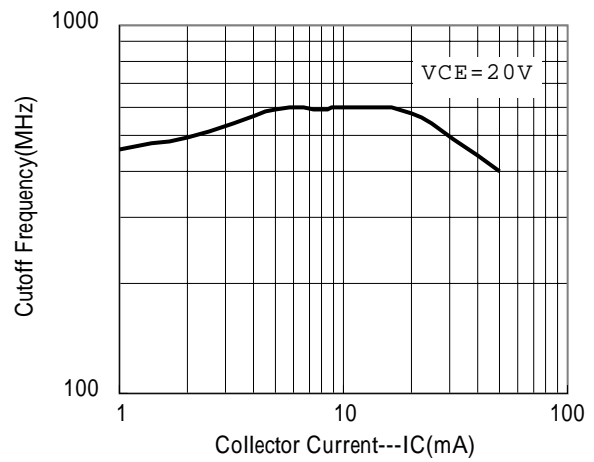
Saturation Voltage vs Collector Current



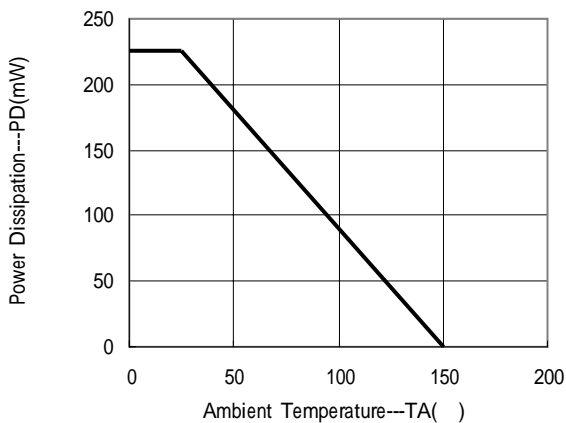
Saturation Voltage vs Collector Current



Cutoff Frequency vs Collector Current

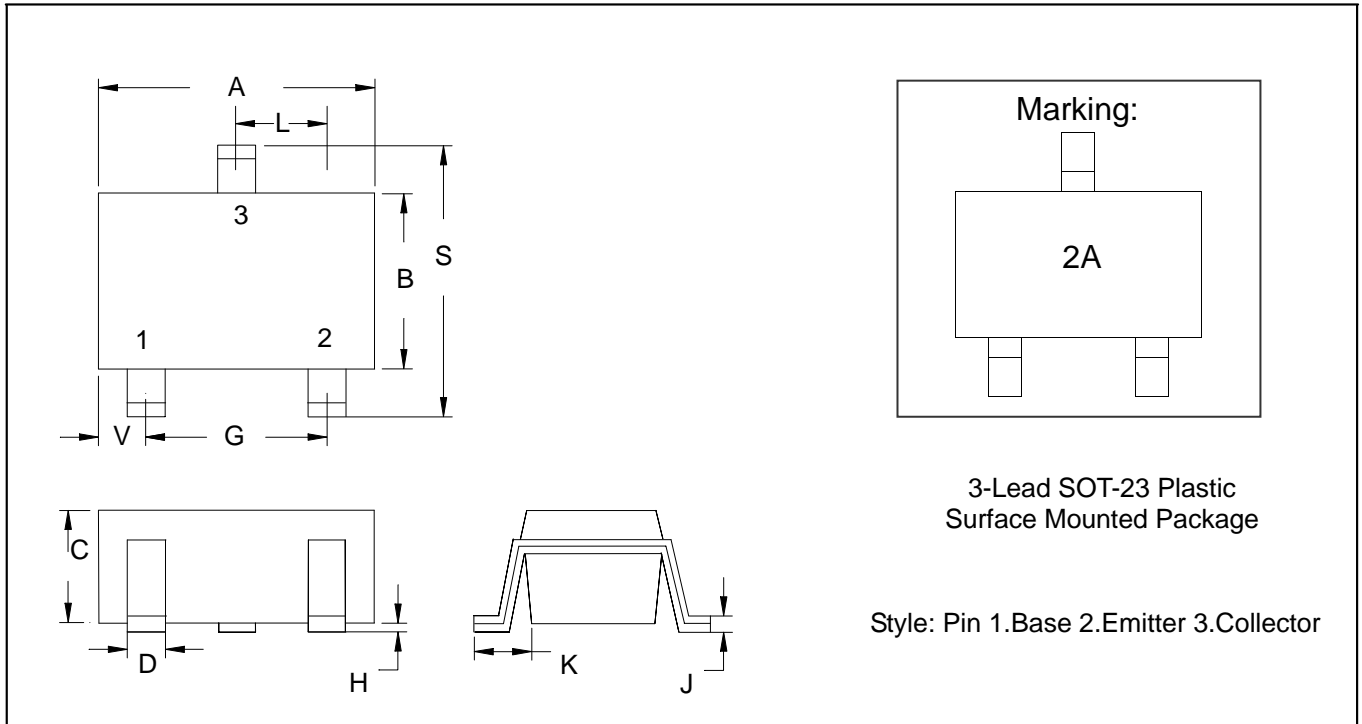


Power Derating Curve





SOT-23 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

Notes: 1.Controlling dimension: millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local Tin Far sales office.

Material:

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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