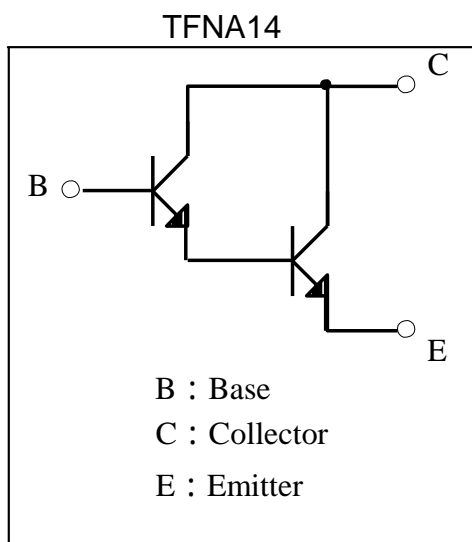


TFNA14

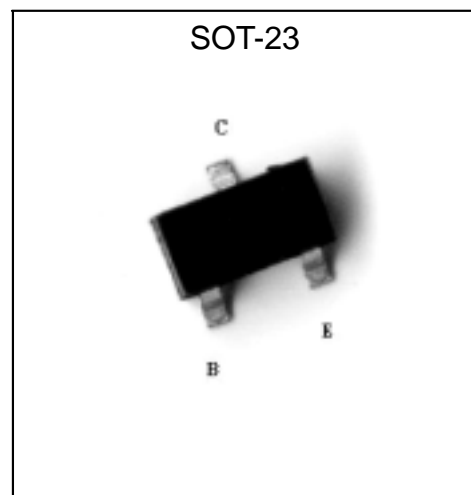
Description

- The TFNA14 is a darlington amplifier transistor
- Complementary to TFNA64.

Equivalent Circuit



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CES}	30	V
Emitter-Base Voltage	V _{EBO}	10	V
Collector Current	I _C	0.5	A
Power Dissipation	P _d	225	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	30	-	-	V	$I_C=100\mu A$
BV_{CES}	30	-	-	V	$I_C=100\mu A$
BV_{EBO}	10	-	-	V	$I_C=10\mu A$
I_{CBO}	-	-	100	nA	$V_{CE}=30V$
I_{EBO}	-	-	100	nA	$V_{EB}=10V$
* $V_{CE(sat)}$	-	-	1.5	V	$I_C=100mA, I_B=0.1mA$
* $V_{BE(on)}$	-	-	2.0	V	$V_{CE}=5V, I_C=100mA$
* h_{FE1}	10K	-	-		$V_{CE}=5V, I_C=10mA$
* h_{FE2}	20K	-	-		$V_{CE}=5V, I_C=100mA$
f_T	125	-	-	MHz	$V_{CE}=5V, I_C=10mA, f=100MHz$
Cob	-	-	6	pF	$V_{CB}=10V, f=1MHz$

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

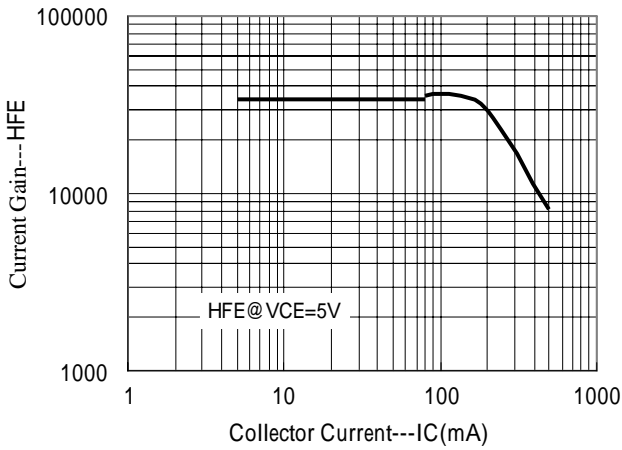
Ordering Information

Device	Package	Shipping	Marking
TFNA14	SOT-23 (Pb-free)	3000 pcs / Tape & Reel	1N

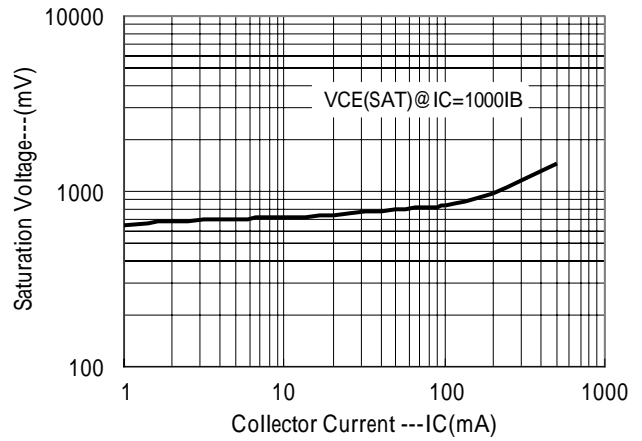


Characteristic Curves

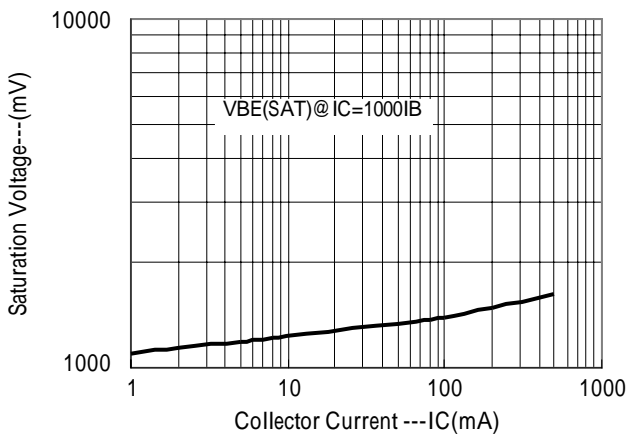
Current Gain vs Collector Current



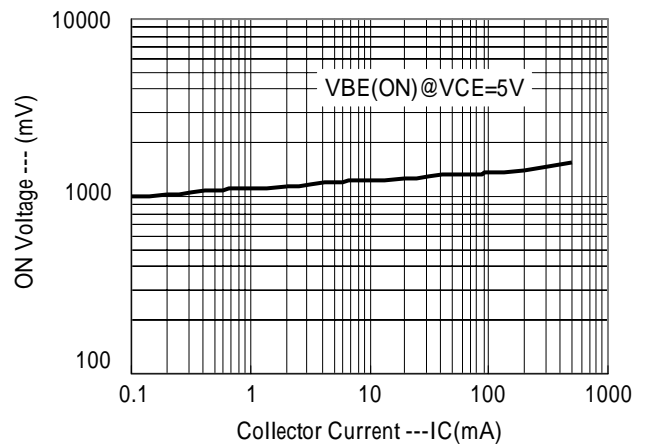
Saturation Voltage vs Collector Current



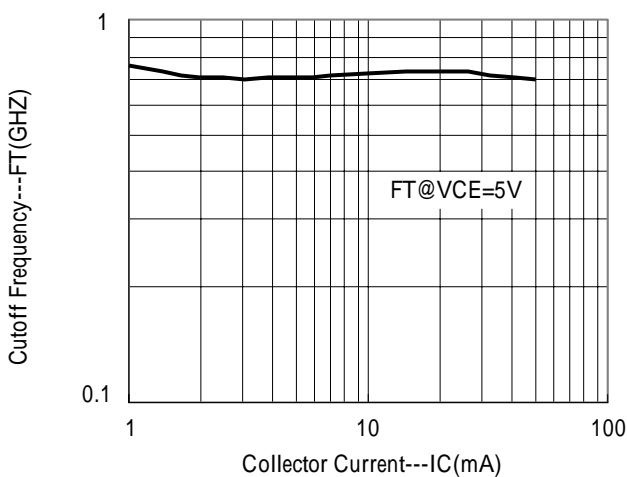
Saturation Voltage vs Collector Current



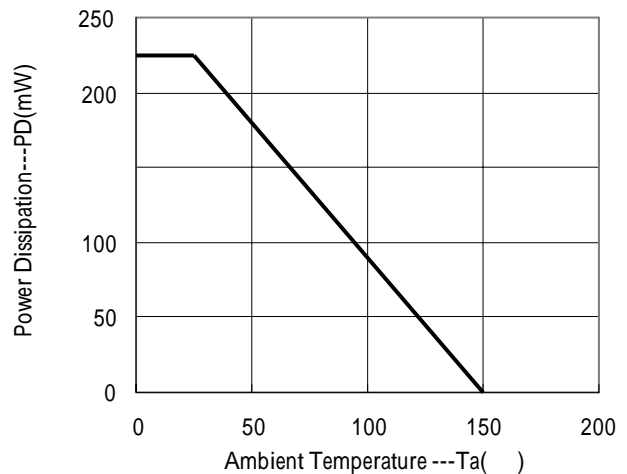
ON Voltage vs Collector Current



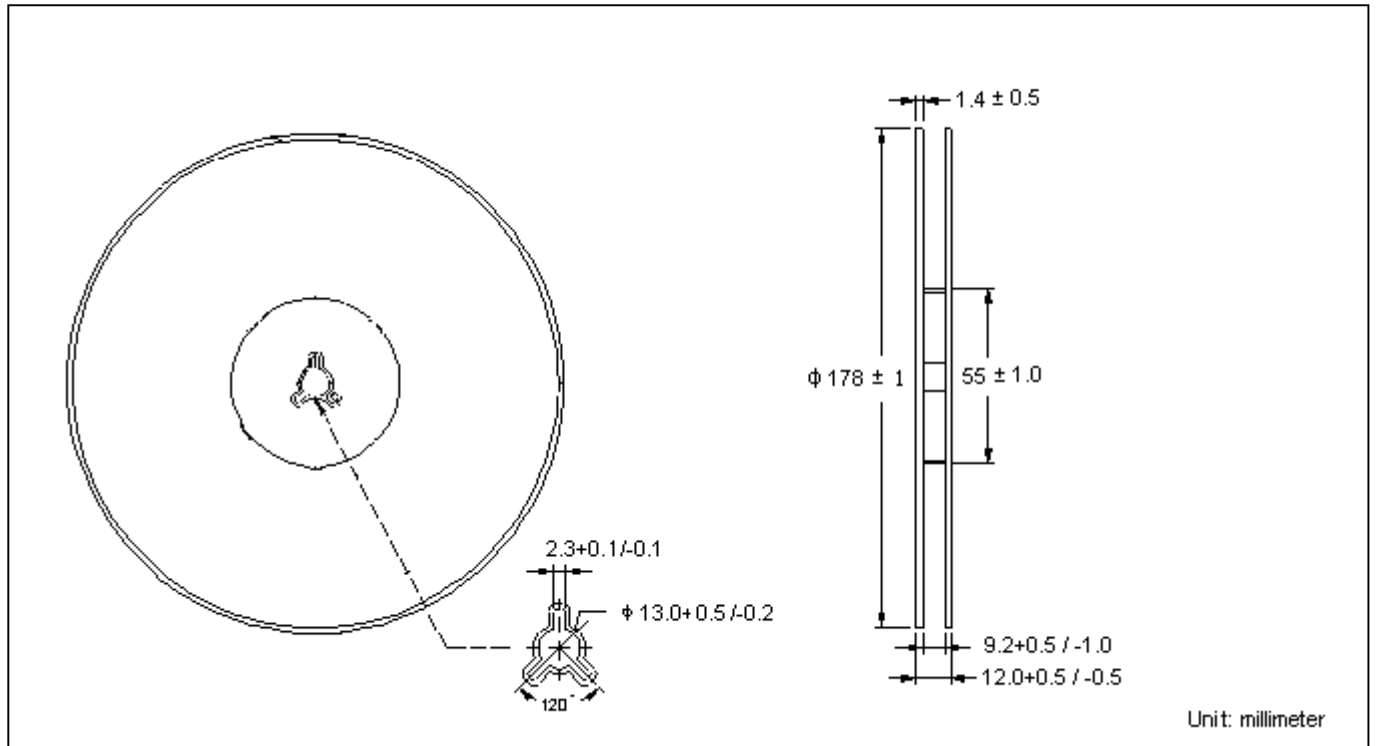
Cutoff Frequency vs Collector Current



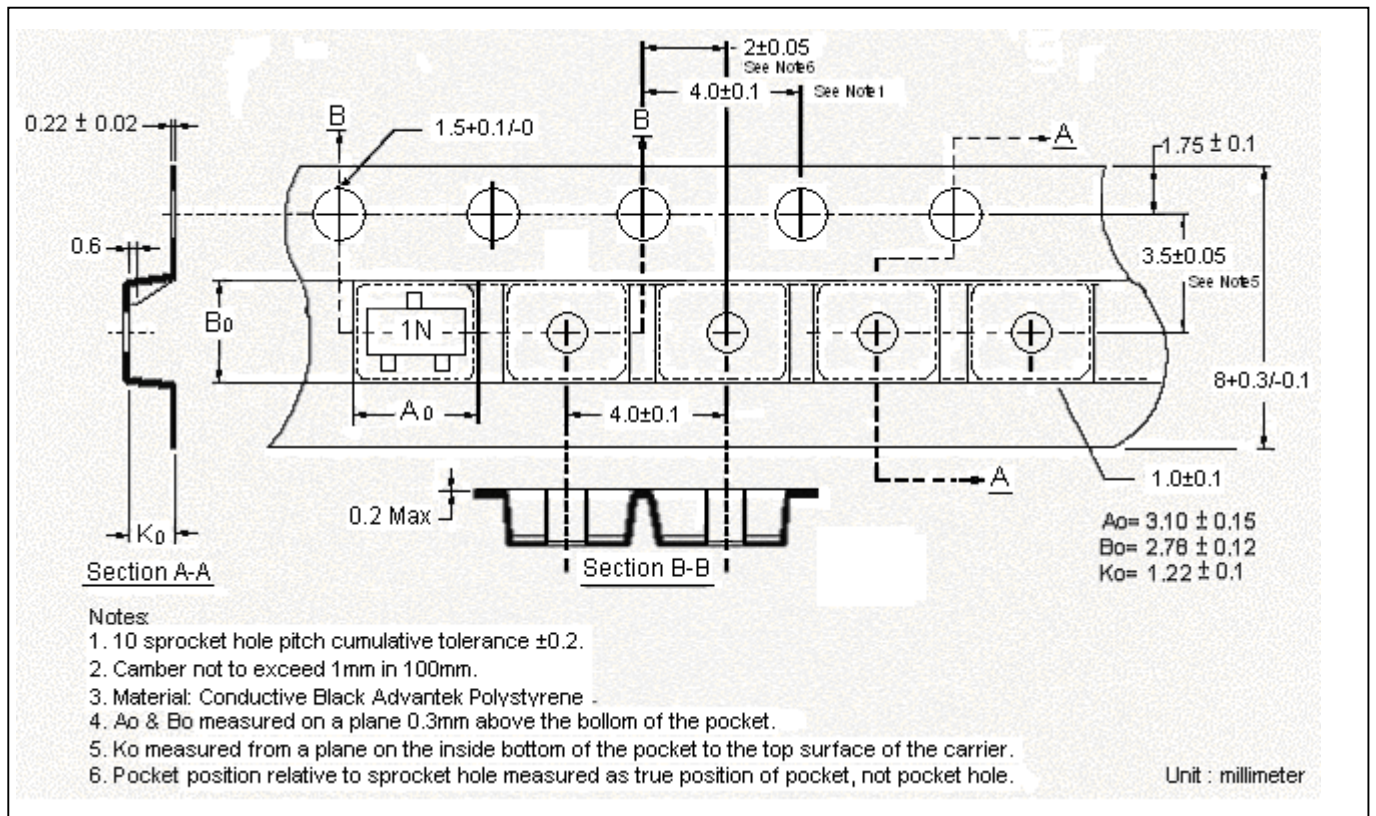
Power Derating Curve



Reel Dimension



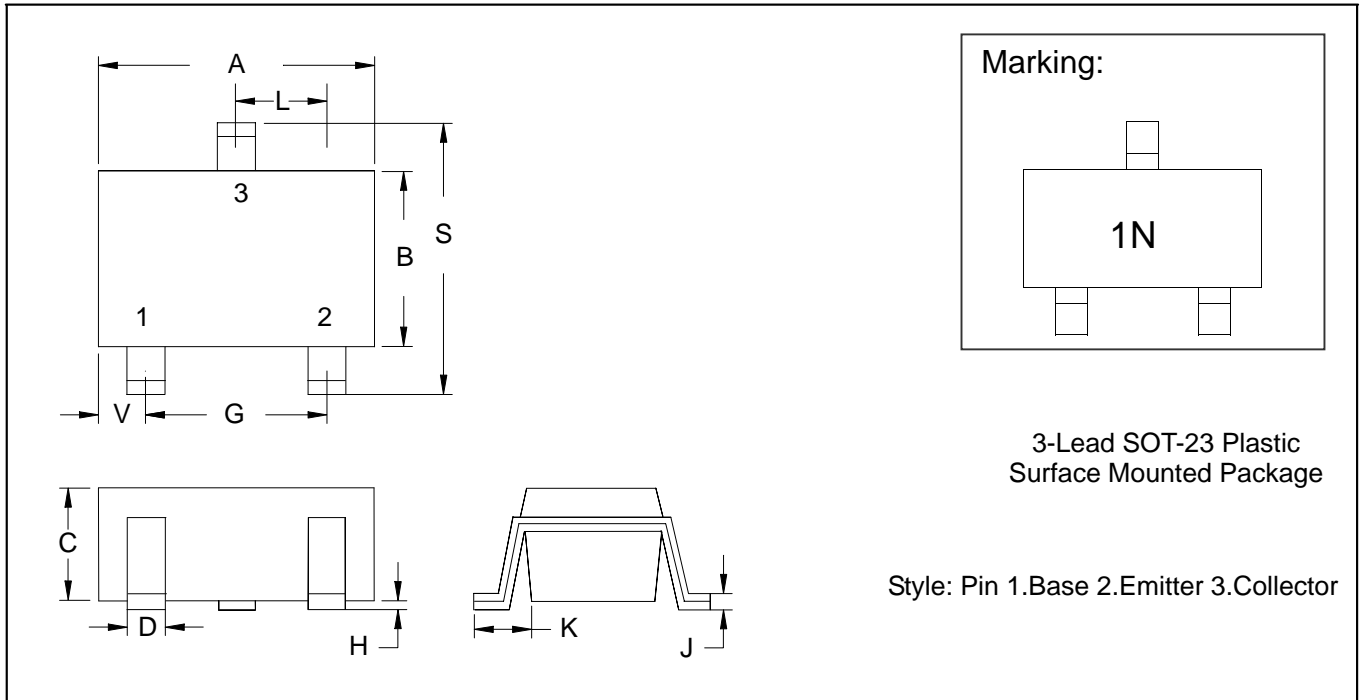
Carrier Tape Dimension



Notes:

1. 10 sprocket hole pitch cumulative tolerance ± 0.2 .
2. Camber not to exceed 1mm in 100mm.
3. Material: Conductive Black Advantek Polystyrene .
4. A_0 & B_0 measured on a plane 0.3mm above the bottom of the pocket.
5. K_0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

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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