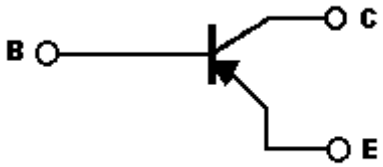
TFN1514

Description

- The TFN1514 is designed for general purpose application requiring high breakdown voltage.
- Large I_C , $I_{C(Max)}$ = -0.6A
- High BV_{CEO}, BV_{CEO}= -150V
- Complementary to TFN3906.
- Pb-free package

Symbol

TFN1514



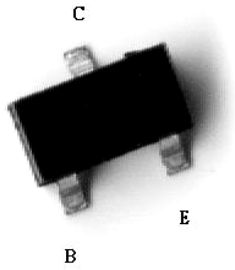
B：Base

C：Collector

E：Emitter

Outline

SOT-23



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-0.6	A
Power Dissipation	Pd	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-160	-	-	V	I_C=-50μA
BV_{CEO}	-150	-	-	V	I_C=-1mA
BV_{EBO}	-5	-	-	V	I_E=-50μA
I_{CBO}	-	-	-50	nA	V_{CB}=-120V
I_{EBO}	-	-	-50	nA	V_{EB}=-4V
*$V_{CE(sat)}$ 1	-	-	-0.2	V	I_C=-10mA, I_B=-1mA
*$V_{CE(sat)}$ 2	-	-	-0.5	V	I_C=-50mA, I_B=-5mA
*$V_{BE(sat)}$ 1	-	-	-1	V	I_C=-10mA, I_B=-1mA
*$V_{BE(sat)}$ 2	-	-	-1	V	I_C=-50mA, I_B=-5mA
h_{FE} 1	50	-	-	-	V_{CE}=-5V, I_C=-1mA
h_{FE} 2	60	-	-	-	V_{CE}=-5V, I_C=-10mA
h_{FE} 3	50	-	-	-	V_{CE}=-5V, I_C=-50mA
h_{FE} 4	120	-	390	-	V_{CE}=-6V, I_C=-2mA
f_T	100	-	-	MHz	V_{CE}=-30V, I_C=-10mA, f=100MHz
Cob	-	-	6	pF	V_{CB}=-10V, f=1MHz

*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Classification Of h_{FE} 4

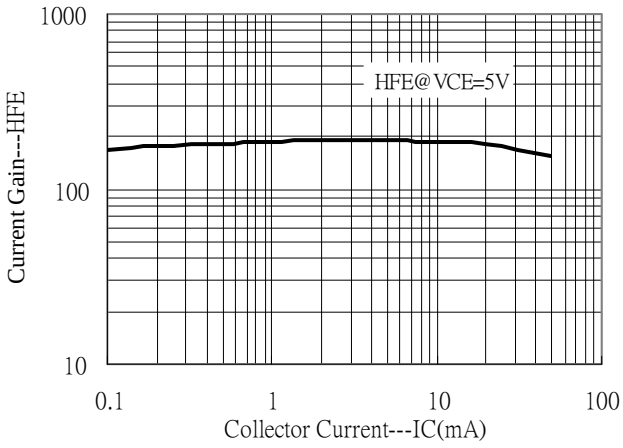
Rank	Q	R
Range	120~270	180~390

Ordering Information

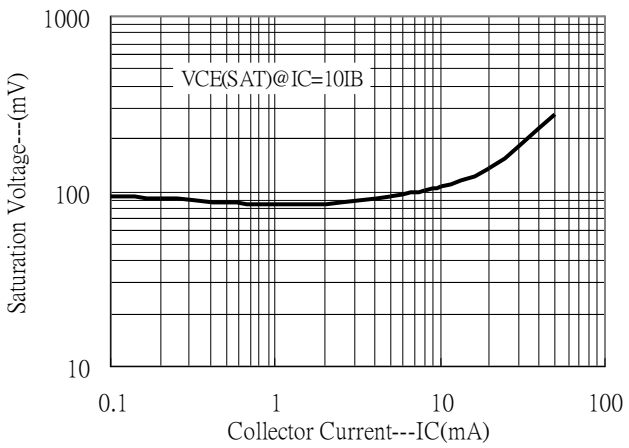
Device	Package	Shipping	Marking
TFN1514	SOT-23 (Pb-free)	3000 pcs / Tape & Reel	2L

Characteristic Curves

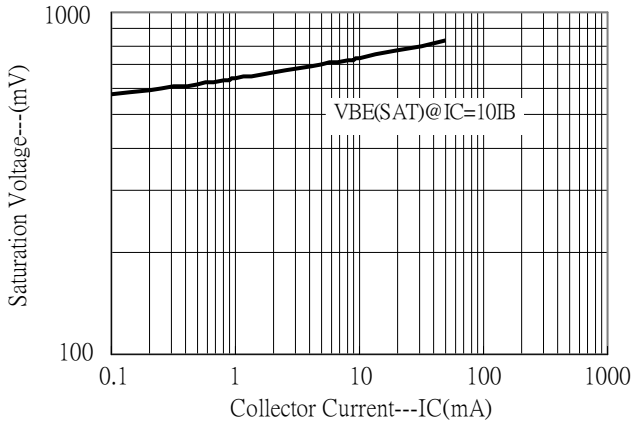
Current Gain vs Collector Current



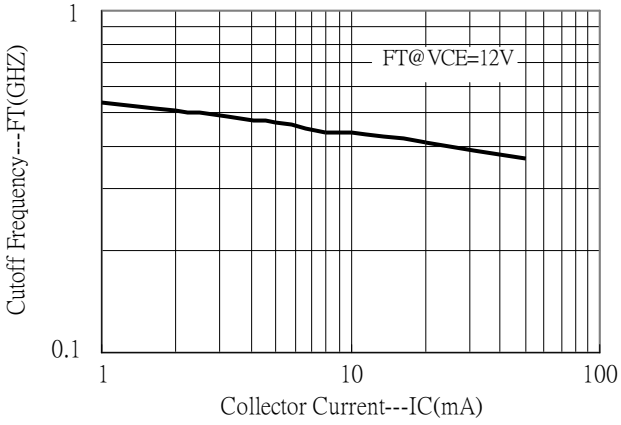
Saturation Voltage vs Collector Current



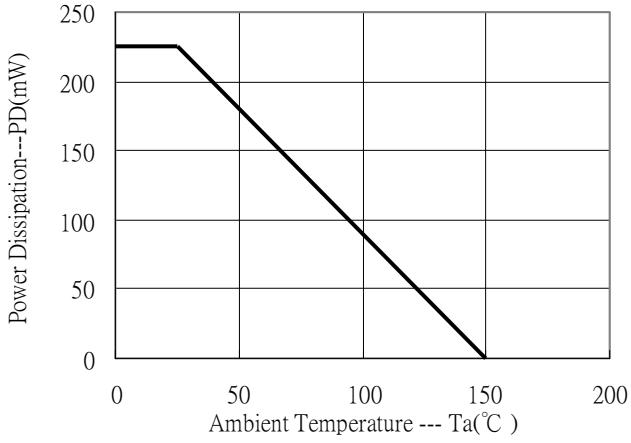
Saturation Voltage vs Collector Current



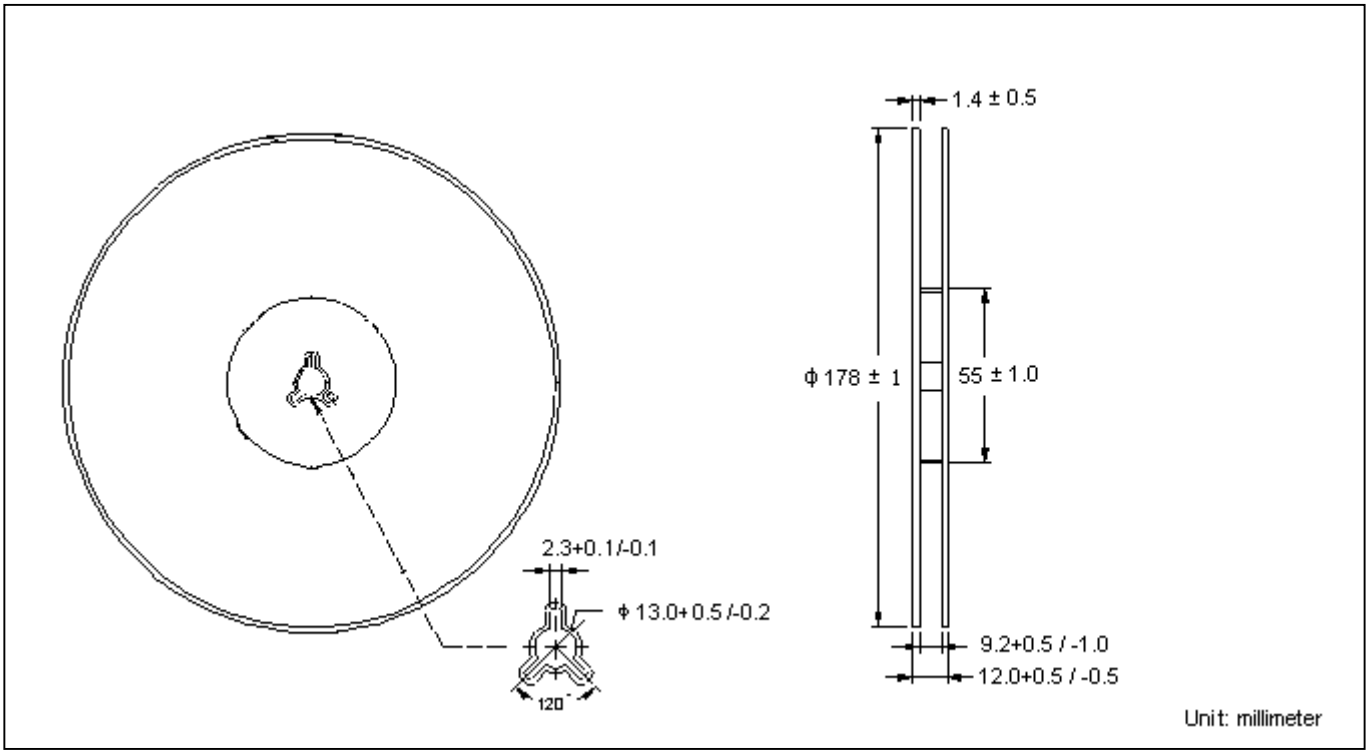
Cutoff Frequency vs Collector Current



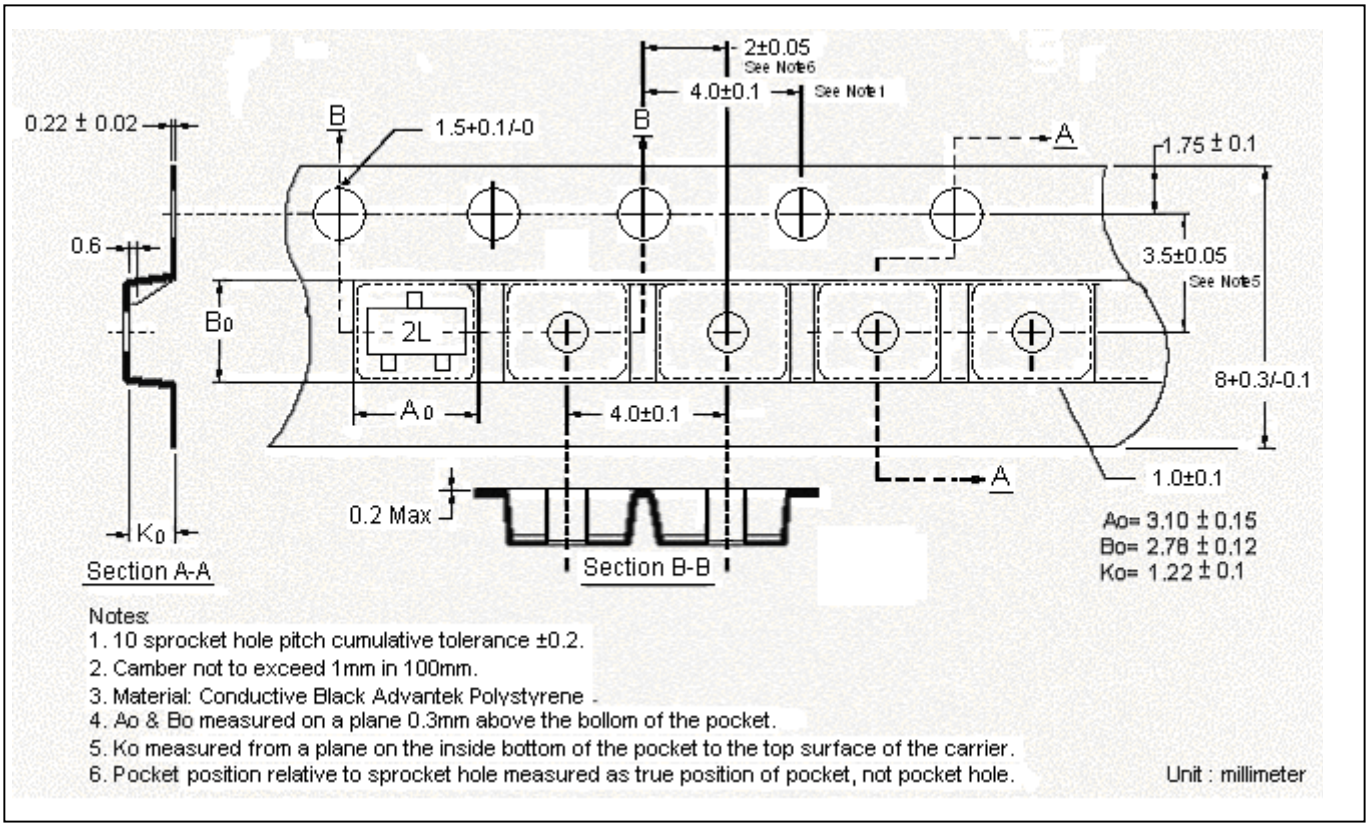
Power Derating Curve



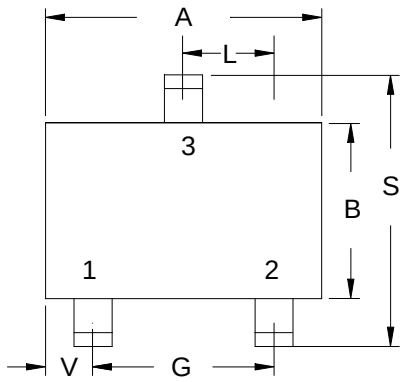
Reel Dimension

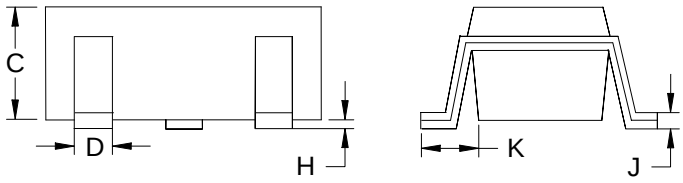


Carrier Tape Dimension

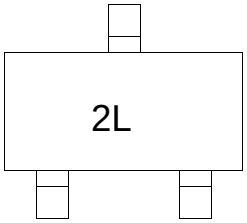


SOT-23 Dimension





Marking:



3-Lead SOT-23 Plastic
Surface Mounted Package

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

*: 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