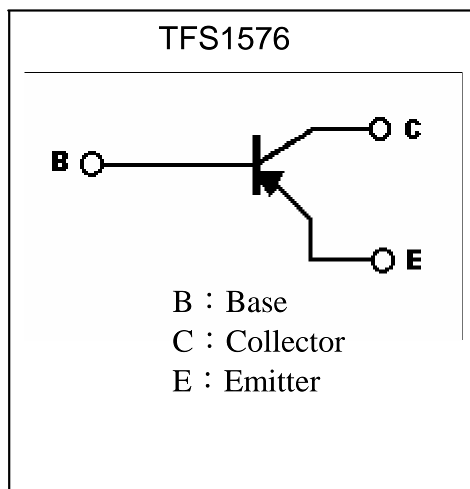
TFS1576

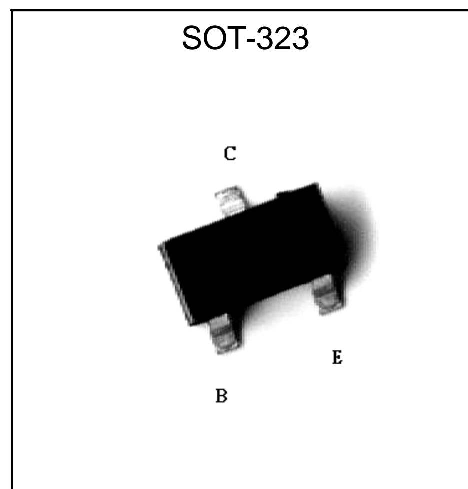
Description

- The TFS1576 is designed for using in driver stage of AF amplifier and general purpose amplification.
- Excellent hFE linearity
- Complementary to BTC4081S3.
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-150	mA
Power Dissipation	Pd	225	mW
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55~+150	℃

Characteristics (Ta=25℃)

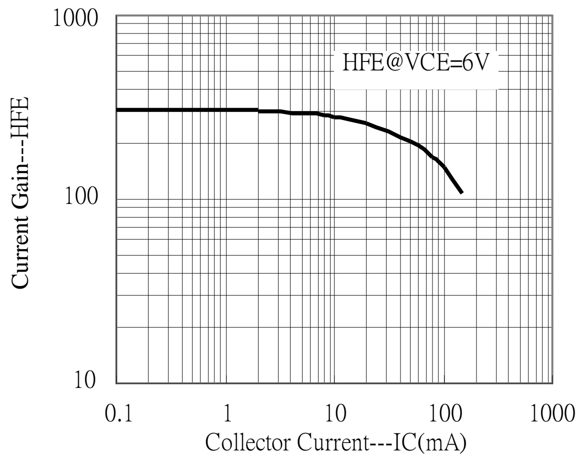
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-50	-	-	V	I_C=-50μA
BV_{CEO}	-45	-	-	V	I_C=-1mA
BV_{EBO}	-6	-	-	V	I_E=-50μA
I_{CBO}	-	-	-0.1	μA	V_{CB}=-60V
I_{EBO}	-	-	-0.1	μA	V_{EB}=-6V
*$V_{CE(sat)}$	-	-0.2	-0.5	V	I_C=-50mA, I_B=-5mA
*h_{FE}	180	-	560		V_{CE}=-6V, I_C=-1mA
f_T	60	140	-	MHz	V_{CE}=-12V, I_C=-2mA, f=30MHz
Cob	-	4.0	5.0	pF	V_{CB}=-12V, f=1MHz

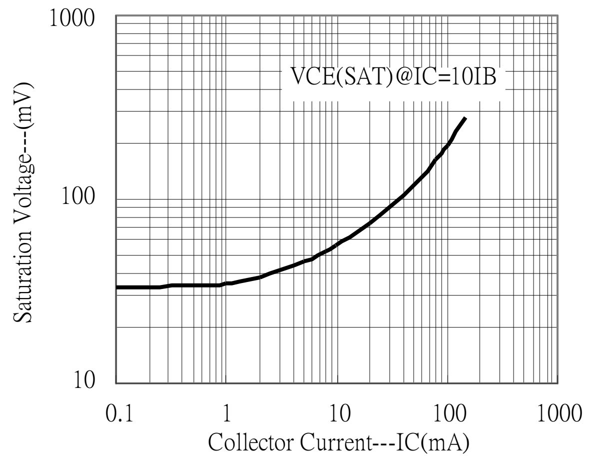
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

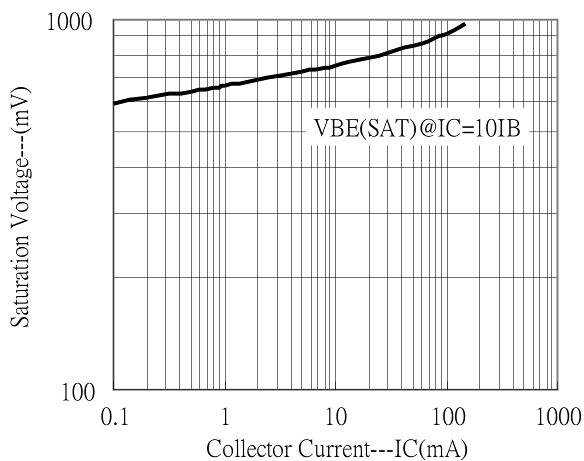
Ordering Information

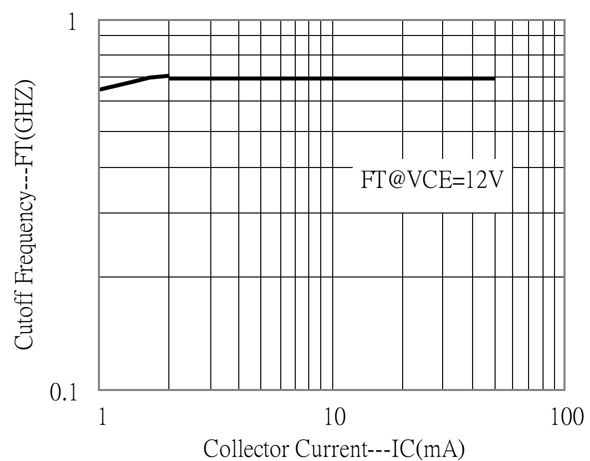
Device	Package	Shipping	Marking
TFS1576	SOT-323 (Pb-free)	3000 pcs / Tape & Reel	FR

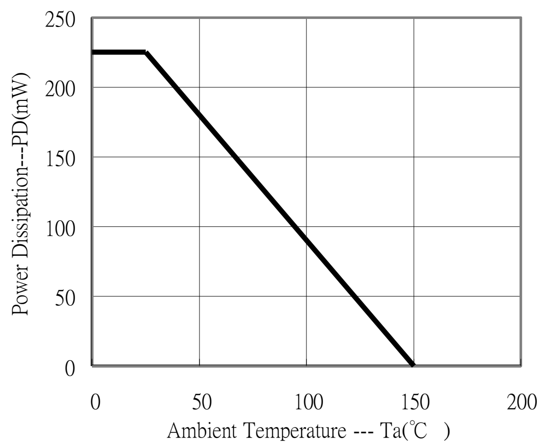
Characteristic Curves



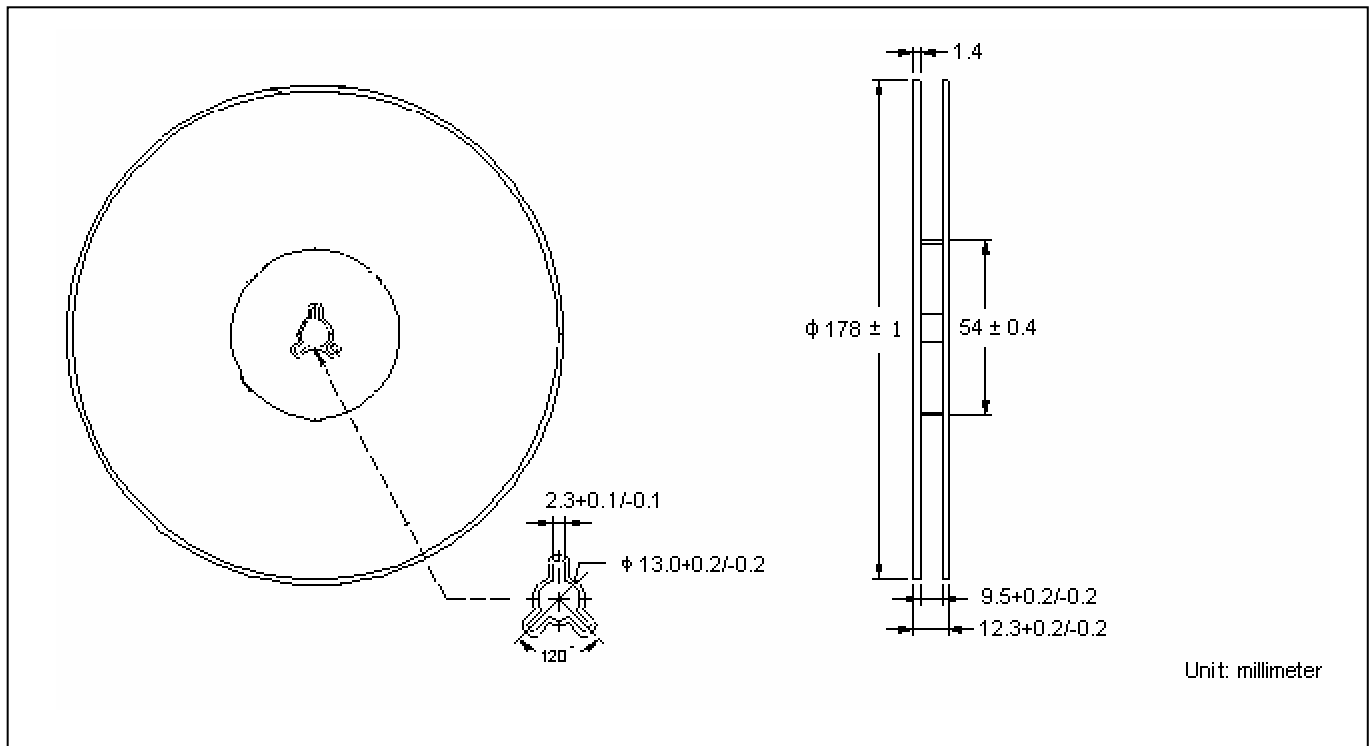




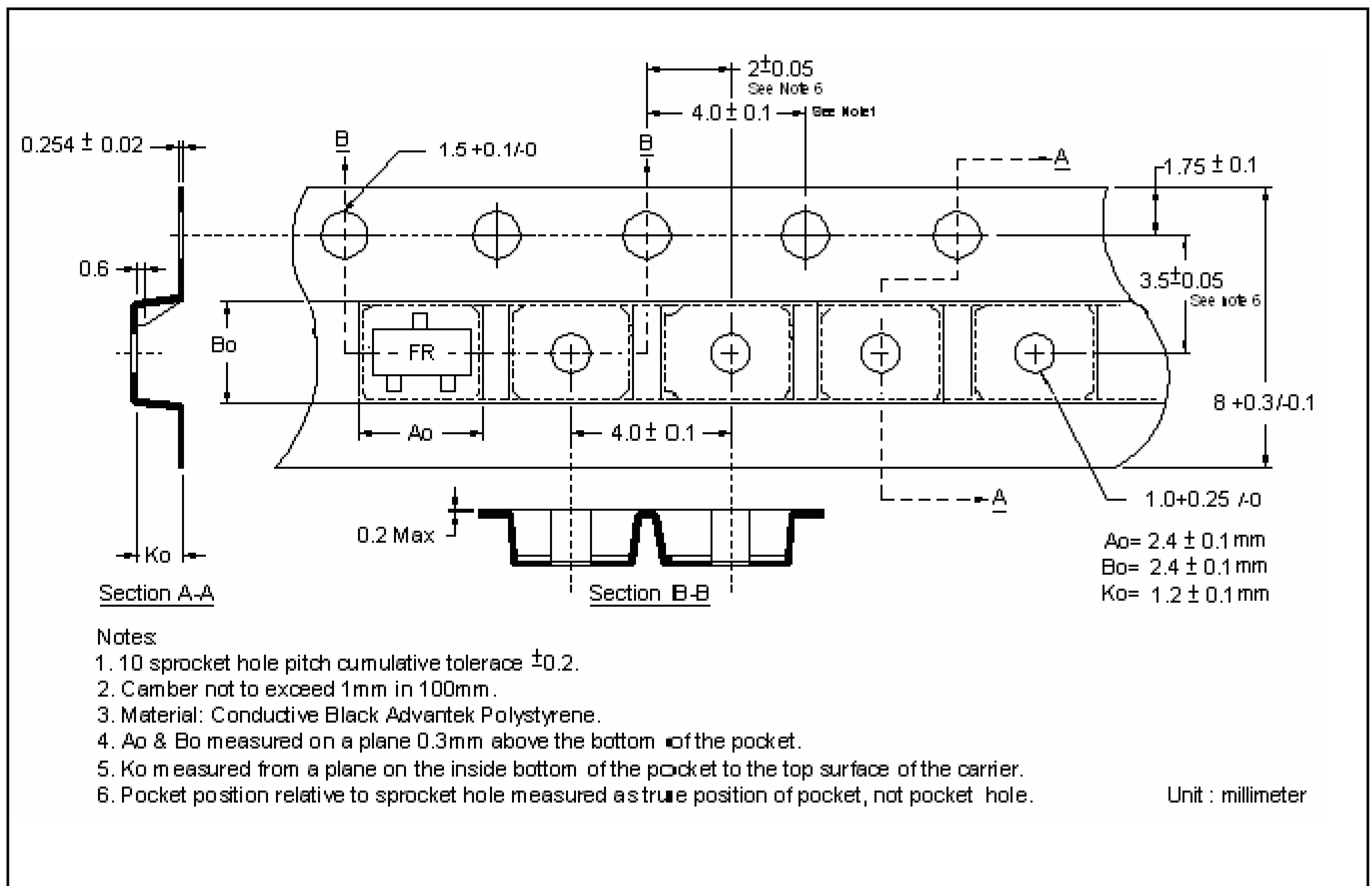




Reel Dimension



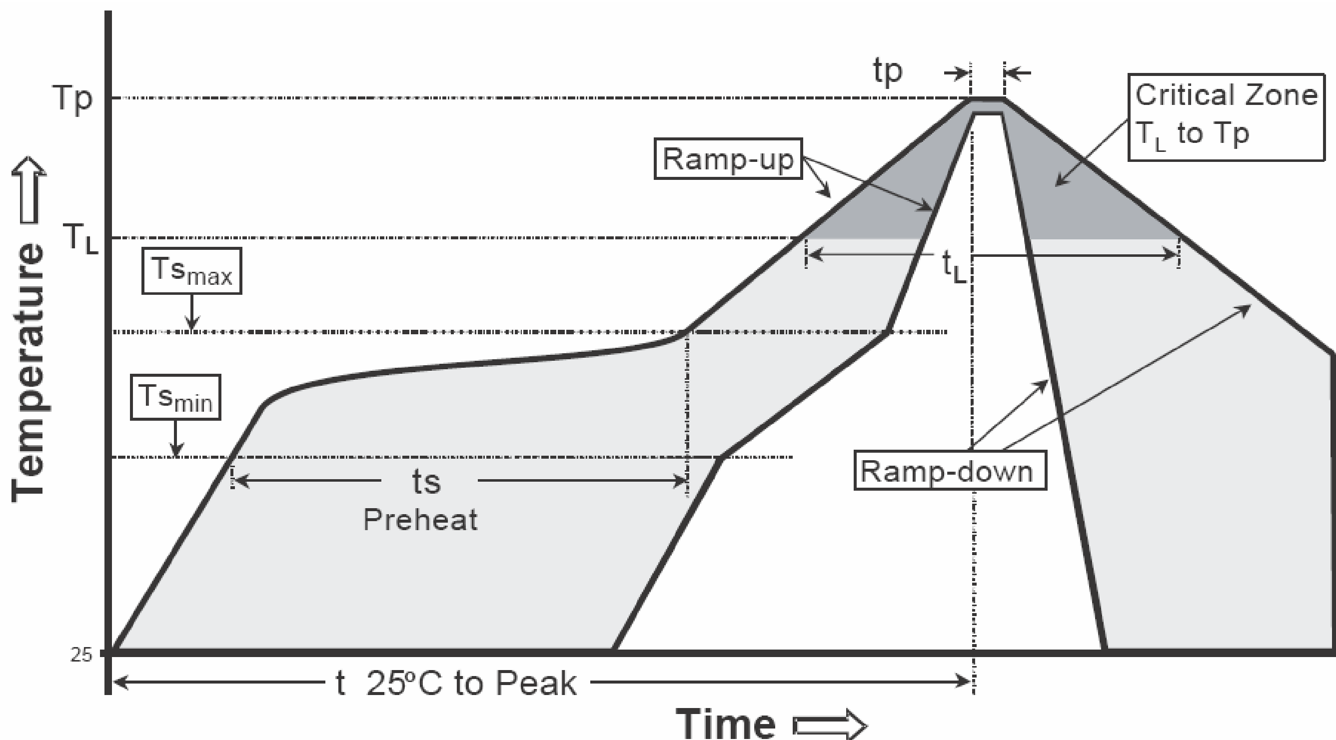
Carrier Tape Dimension



Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

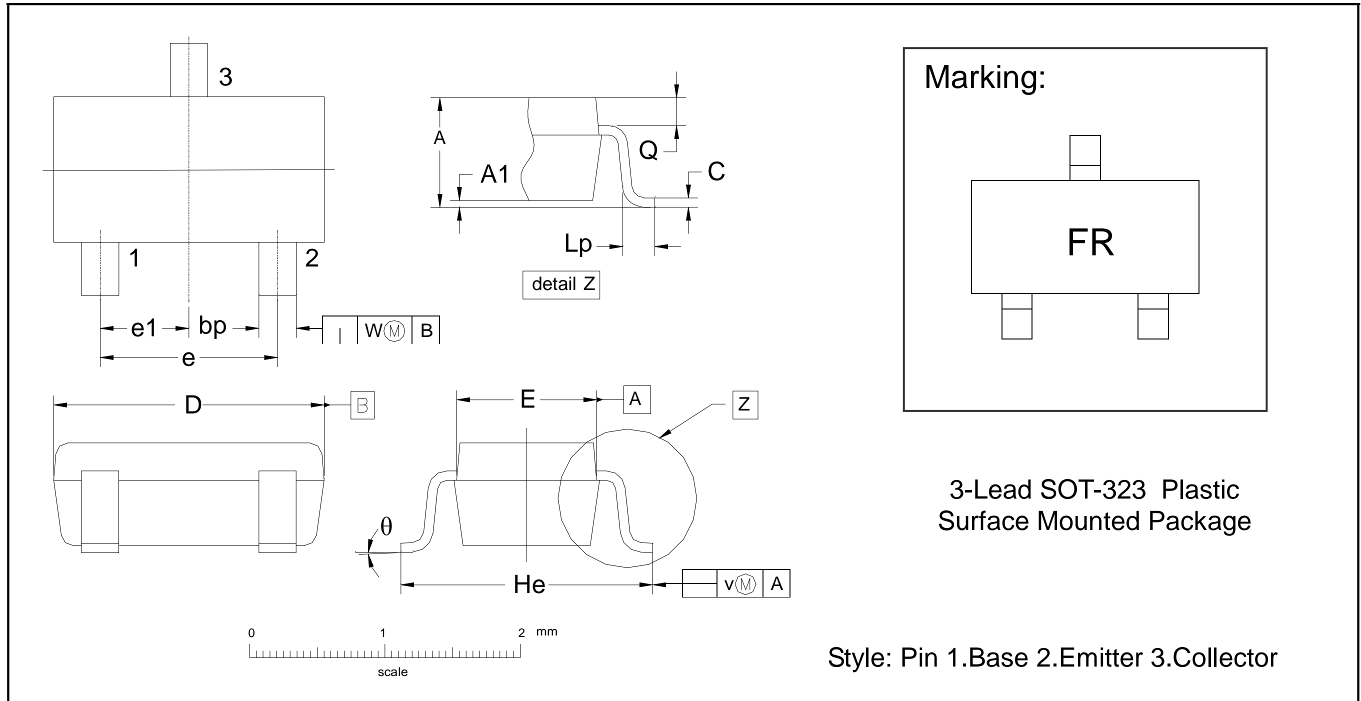
Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(Ts min) −Temperature Max(Ts max) −Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: −Temperature (T_L) − Time (t_L)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(T_P)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

SOT-323 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0315	0.0433	0.80	1.10	e1	0.0256	-	0.65	-
A1	0.0000	0.0039	0.00	0.10	He	0.0787	0.0886	2.00	2.25
bp	0.0118	0.0157	0.30	0.40	Lp	0.0059	0.0177	0.15	0.45
C	0.0039	0.0098	0.10	0.25	Q	0.0051	0.0091	0.13	0.23
D	0.0709	0.0866	1.80	2.20	v	0.0079	-	0.2	-
E	0.0453	0.0531	1.15	1.35	w	0.0079	-	0.2	-
e	0.0512	-	1.3	-	θ	-	-	10°	0°

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: Pure tin plated
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of Tin Far.
- Tin Far reserves the right to make changes to its products without notice.
- Tin Far ***semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.***
- Tin Far assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.