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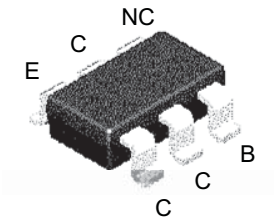
FAIRCHILD SEMICONDUCTOR TM

FMBS549



Pin 1

Package: SuperSOT-6 single
Mark : .S1

PNP Low Saturation Transistor

ThIs device is designed with high current gain and low saturation voltage with collector currents up to 2A continous. Sourced from process PB.

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	30	V
V_{CBO}	Collector-Base Voltage	35	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous - Peak Pulse Current	1 2	A A
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

1) These ratings are based on a maximum junction temperature of 150°C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

T_A = 25°C unless otherwise noted

Symbol	Characteristics	Max	Units
P_D	Total Device Dissipation*	700	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient, total	180	°C/W

*Device mounted on a 1 in2 pad of 2 oz copper.

PNP Low Saturation transistor
(continued)

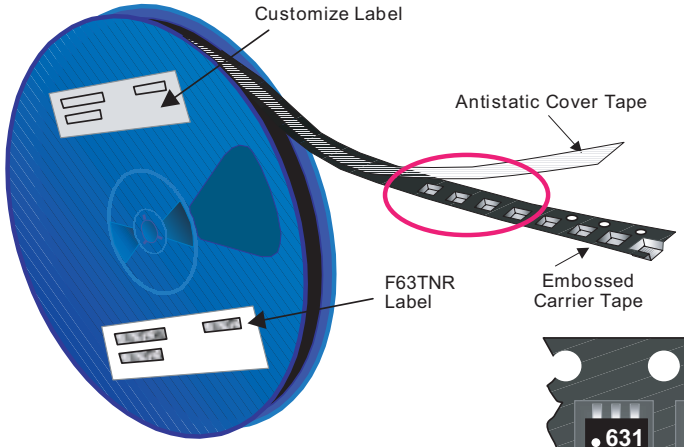
Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
BV_{CEO}	Collector to Emitter Voltage	Ic = 10 mA	30		V
BV_{CBO}	Collector to Base Voltage	Ic = 100 uA	35		V
BV_{EBO}	Emitter to Base Voltage	Ie = 100 uA	5		V
I_{CBO}	Collector Cutoff Current	Vcb = 30 V Vcb = 30 V, Ta= 100C		100 10	nA uA
I_{EBO}	Emitter Cutoff Current	Veb = 4 V		100	nA
ON CHARACTERISTICS					
h_{FE}	DC Current Gain	Vce = 2V, Ic = 50 mA Vce = 2V, Ic = 500 mA Vce = 2V, Ic = 1 A Vce = 2V, Ic = 2 A Vce = 0.8V, Ic = 500 m A	70 100 80 40 100	300	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	Ic = 250 mA, Ib = 25 mA Ic = 500 mA, Ib = 50 mA Ic = 1 A, Ib = 100 mA Ic = 2 A, Ib = 200 mA		200 350 500 750	mV mV mV mV
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	Ic = 1 A, Ib = 100 mA		1.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	Ic = 1 A, Vce = 2 V		1	V
SMALL SIGNAL CHARACTERISTICS					
C_{obo}	Output Capacitance	Vcb = 10V, f = 1MHz		25	pF
f_T	Current Gain - Bandwidth Product	Vce = 5 V, Ic = 100mA, f = 100MHz	100		MHz

SuperSOT™-6 Tape and Reel Data and Package Dimensions

FAIRCHILD SEMICONDUCTOR™

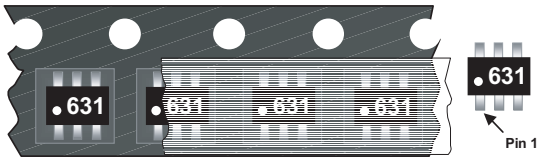
SSOT-6 Packaging Configuration: Figure 1.0



Packaging Description:

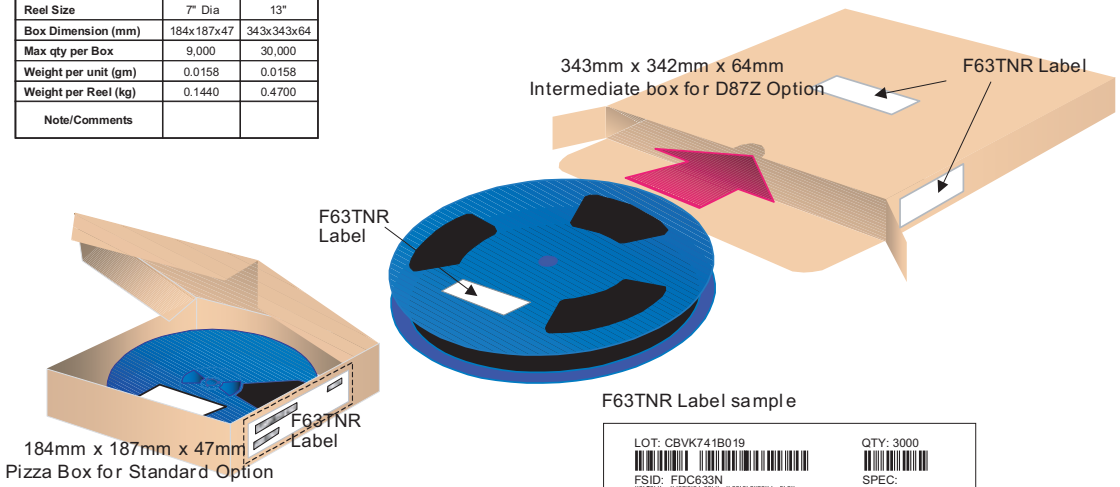
SSOT-6 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 177cm diameter reel. The reels are dark blue in color and is made of polystyrene plastic (anti-static coated). Other option comes in 10,000 units per 13" or 330cm diameter reel. This and some other options are described in the Packaging Information table.

These full reels are individually barcode labeled and placed inside a pizza box (illustrated in figure 1.0) made of recyclable corrugated brown paper with a Fairchild logo printing. One pizza box contains three reels maximum. And these pizza boxes are placed inside a barcode labeled shipping box which comes in different sizes depending on the number of parts shipped.



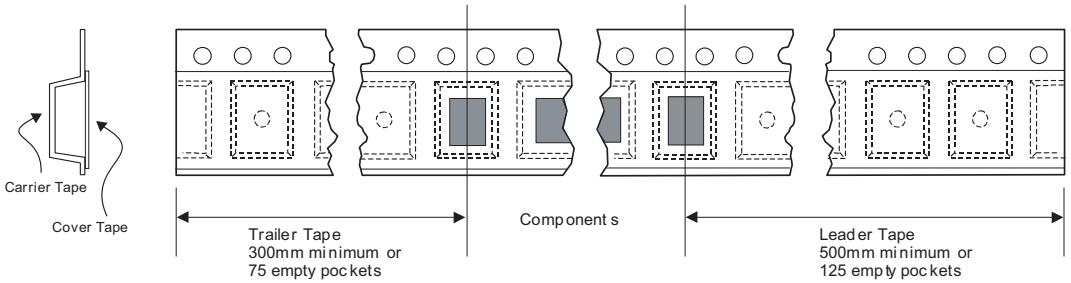
SSOT-6 Unit Orientation

SSOT-6 Packaging Information		
Packaging Option	Standard (no flow code)	D87Z
Packaging type	TNR	TNR
Qty per Reel/Tube/Bag	3,000	10,000
Reel Size	7" Dia	13"
Box Dimension (mm)	184x187x47	343x343x64
Max qty per Box	9,000	30,000
Weight per unit (gm)	0.0158	0.0158
Weight per Reel (kg)	0.1440	0.4700
Note/Comments		



F63TNR Label sample

SSOT-6 Tape Leader and Trailer Configuration: Figure 2.0

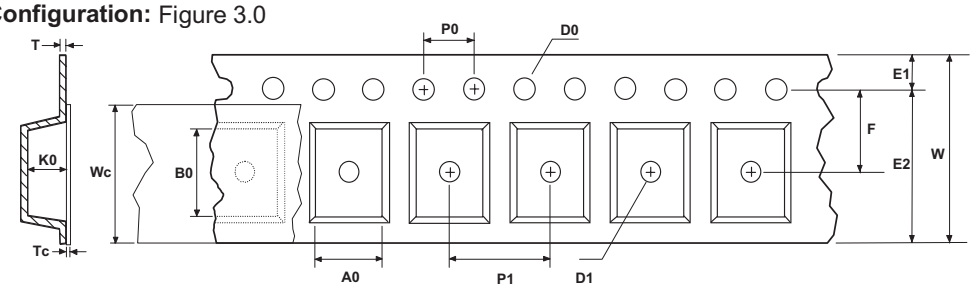


August 1999, Rev. C

SuperSOT™-6 Tape and Reel Data and Package Dimensions, continued

SSOT-6 Embossed Carrier Tape

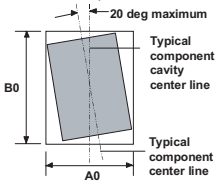
Configuration: Figure 3.0



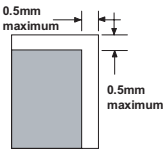
Dimensions are in millimeter														
Pkg type	**A0**	**B0**	**W**	**D0**	**D1**	**E1**	**E2**	**F**	**P1**	**P0**	**K0**	**T**	**Wc**	**Tc**
SSOT-6 (8mm)	3.23 +/-0.10	3.18 +/-0.10	8.0 +/-0.3	1.55 +/-0.05	1.125 +/-0.125	1.75 +/-0.10	6.25 min	3.50 +/-0.05	4.0 +/-0.1	4.0 +/-0.1	1.37 +/-0.10	0.255 +/-0.150	5.2 +/-0.3	0.06 +/-0.02

Notes: A0, B0, and K0 dimensions are determined with respect to the EIA/Jedec RS-481 rotational and lateral movement requirements (see sketches A, B, and C).

Sketch A (Side or Front Sectional View)
Component Rotation

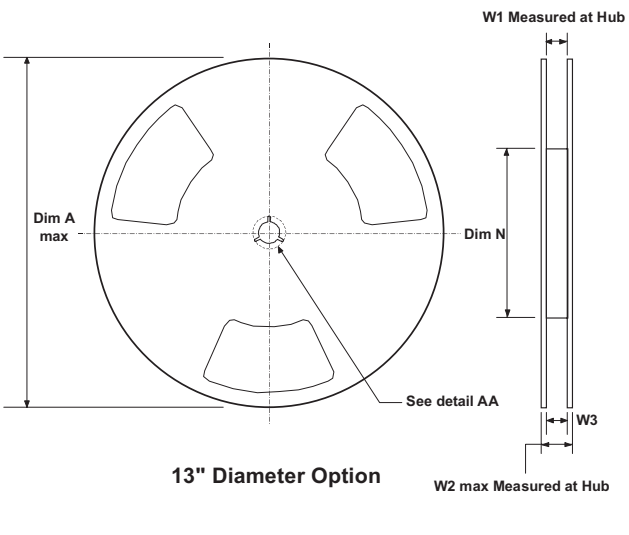


Sketch B (Top View)
Component Rotation

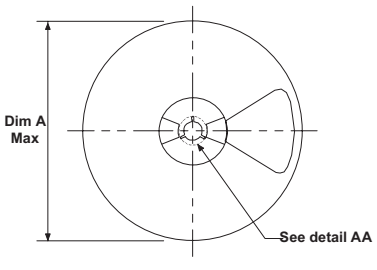


Sketch C (Top View)
Component lateral movement

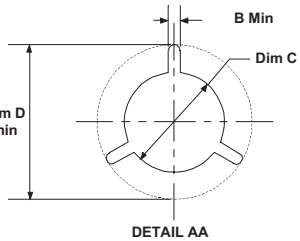
SSOT-6 Reel Configuration: Figure 4.0



13" Diameter Option



7" Diameter Option

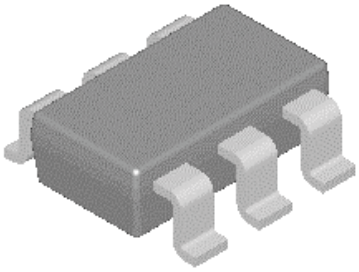


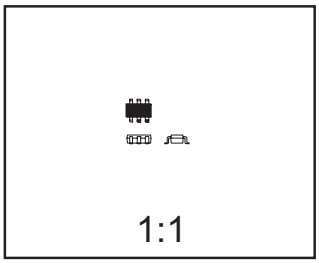
Dimensions are in inches and millimeters									
Tape Size	**Reel Option**	**Dim A**	**Dim B**	**Dim C**	**Dim D**	**Dim N**	**Dim W1**	**Dim W2**	**Dim W3 (LSL-USL)**
8mm	7" Dia	7.00 177.8	0.059 1.5	512 +0.020/-0.008 13 +0.5/-0.2	0.795 20.2	2.165 55	0.331 +0.059/-0.000 8.4 +1.5/0	0.567 14.4	0.311 – 0.429 7.9 – 10.9
8mm	13" Dia	13.00 330	0.059 1.5	512 +0.020/-0.008 13 +0.5/-0.2	0.795 20.2	4.00 100	0.331 +0.059/-0.000 8.4 +1.5/0	0.567 14.4	0.311 – 0.429 7.9 – 10.9

July 1999, Rev. C

SuperSOT™-6 Tape and Reel Data and Package Dimensions, continued

SuperSOT -6 (FS PKG Code 31, 33)

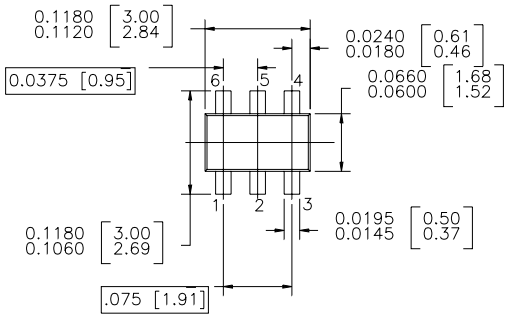


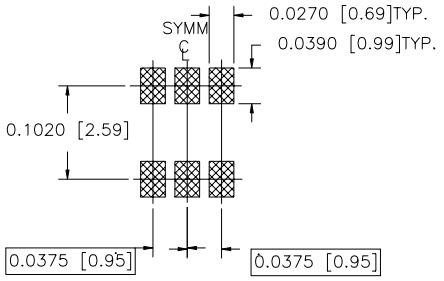


Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

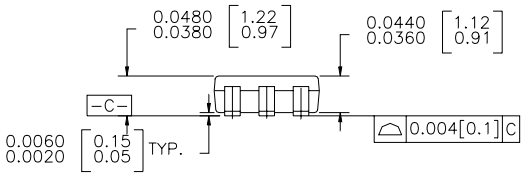
Part Weight per unit (gram): 0.0158

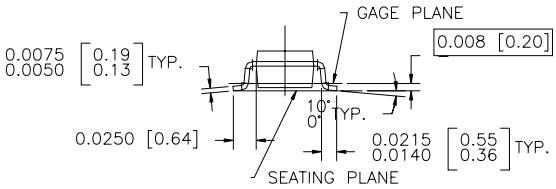




LAND PATTERN RECOMMENDATION

CONTROLLING DIMENSION IS INCH
VALUES IN [ ] ARE MILLIMETERS





NOTES : UNLESS OTHERWISE SPECIFIED

1.0 STANDARD LEAD FINISH : 150 MICROINCHES 93.81 MICROMETERS)
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2.0 NO JEDEC REGISTRATION AS OF JULY 1996

SUPER SOT 6 LEADS

September 1998, Rev. A

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Rev. D