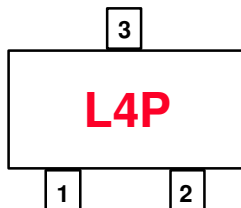


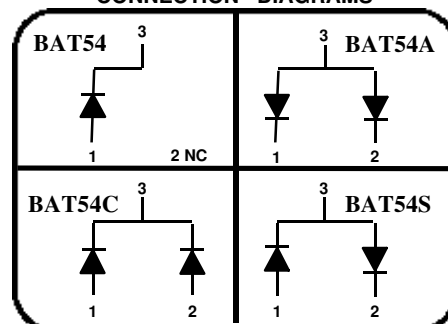
BAT54/A/C/S

PACKAGE
SOT-23
TO-236AB (Low)



MARKING
BAT54 L4P BAT54C L43
BAT54A L42 BAT54S L44

CONNECTION DIAGRAMS



Schottky Barrier Diode

Sourced from Process KA

Absolute Maximum Ratings* TA = 25°C unless otherwise noted

Sym	Parameter	Value	Units
T_{stg}	Storage Temperature	-55 to +150	°C
T_J	Operating Junction Temperature	+150	°C
W_{IV}	Working Inverse Voltage	25	V
I_F	DC Forward Current (I_F)	200	mA
i_f	Recurrent Peak Forward Current (IFRM)	300	mA
$i_{F(surge)}$	Peak Forward Surge Current (IFSM) Pulse Width = 1.0 Second	600	mA
P_D	Total Power Dissipation at 25°C	230	mW
	Theta (Rth j-a) (Note 1)	430	°K/W

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

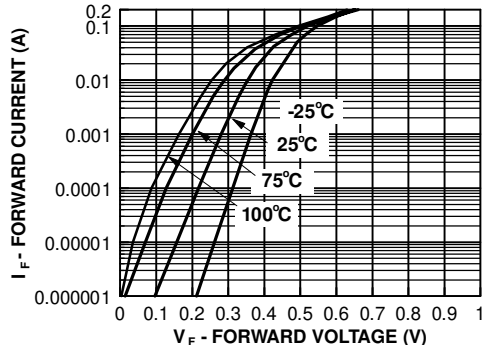
NOTES:

1) From junction to ambient mounted on a ceramic substrate of 10 mm x 8 mm x 0.6 mm

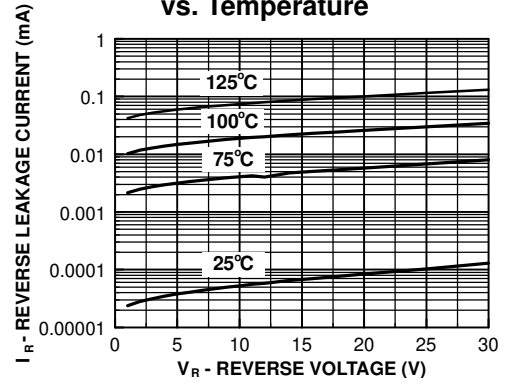
Electrical Characteristics TA = 25°C unless otherwise noted

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
B_V	Breakdown Voltage	30		V	$I_R = 10 \mu A$
I_R	Reverse Leakage		2.0	μA	$V_R = 25 V$
V_F	Forward Voltage		240 320 400 500 1.0	mV mV mV mV V	$I_F = 100 \mu A$ $I_F = 1.0 mA$ $I_F = 10 mA$ $I_F = 30 mA$ $I_F = 100 mA$
C_T	Capacitance		10	pF	$V_R = 1.0 V$ $f = 1.0 MHz$
T_{RR}	Reverse Recovery Time		5.0	ns	$I_F = I_R = 10 mA$ $I_{RR} = 1.0 mA$ $R_L = 100 Ohms$

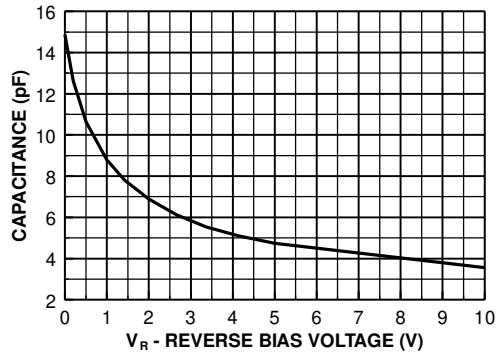
Forward Voltage
vs. Temperature



Reverse Leakage Current
vs. Temperature



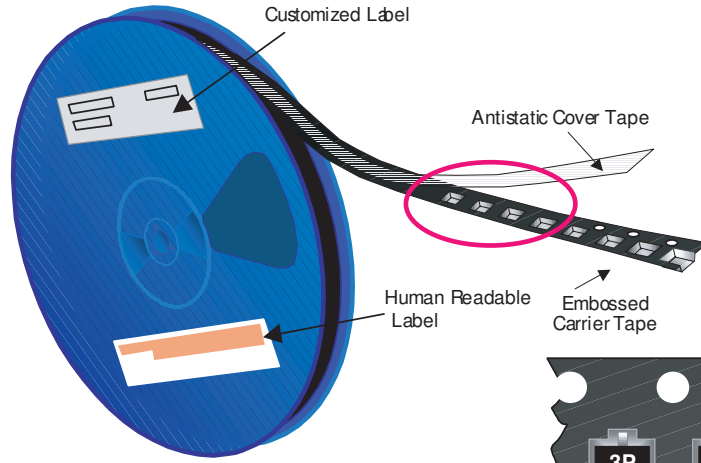
Capacitance
vs. Reverse Bias Voltage



SOT-23 Tape and Reel Data and Package Dimensions



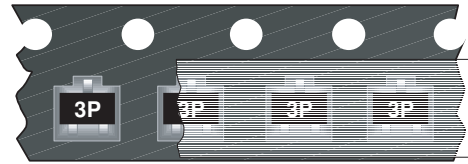
SOT-23 Packaging Configuration: Figure 10



Packaging Description:

SOT-23 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 10000 units per 13" or 330cm diameter reel. This and some other options are described in the Packaging Information table.

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



SOT-23 Unit Orientation

SOT-23 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)	187x107x183	343x343x64
Max qty per Box	24,000	30,000
Weight per unit (gm)	0.0082	0.0082
Weight per Reel (kg)	0.1175	0.4006
Note/Comments		

343mm x 342mm x 64mm
Intermediate box for L87Z Option

Human Readable Label

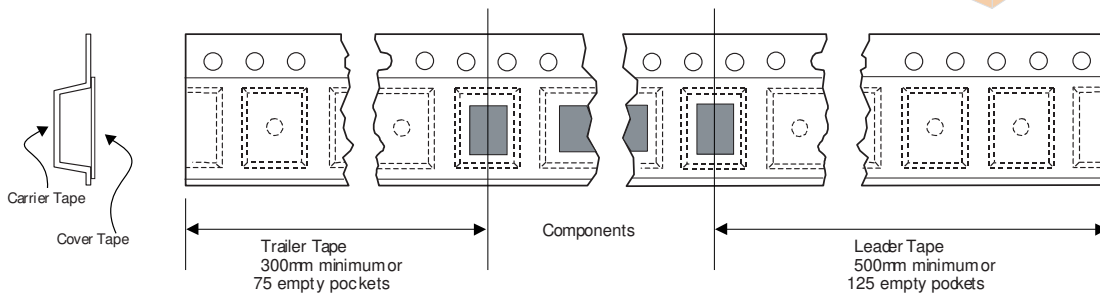
Human Readable Label sample



Human readable Label

187mm x 107mm x 183mm
Intermediate Box for Standard Option

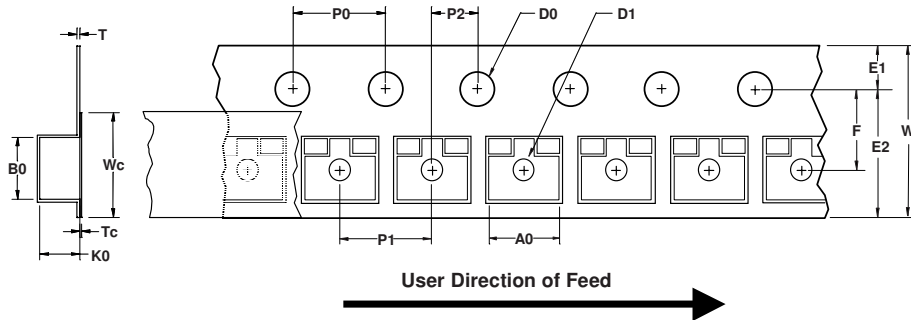
SOT-23 Tape Leader and Trailer Configuration: Figure 20



SOT-23 Tape and Reel Data and Package Dimensions, continued

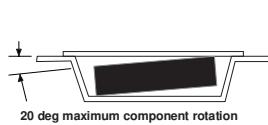
SOT-23 Embossed Carrier Tape

Configuration: Figure 3.0

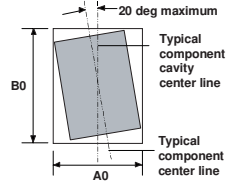


Dimensions are in millimeter														
Pkg type	A0	B0	W	D0	D1	E1	E2	F	P1	P0	K0	T	Wc	Tc
SOT-23 (8mm)	3.15 +/-0.10	2.77 +/-0.10	8.0 +/-0.3	1.55 +/-0.05	1.125 +/-0.125	1.75 +/-0.10	6.25 min	3.50 +/-0.05	4.0 +/-0.1	4.0 +/-0.1	1.30 +/-0.10	0.228 +/-0.013	5.2 +/-0.3	0.06 +/-0.02

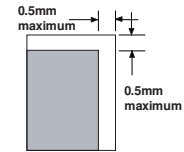
Notes: A0, B0, and K0 dimensions are determined with respect to the EIA/Jedec RS-481 rotational and lateral movement requirements (see sketches A, B, and C).



Sketch A (Side or Front Sectional View)
Component Rotation

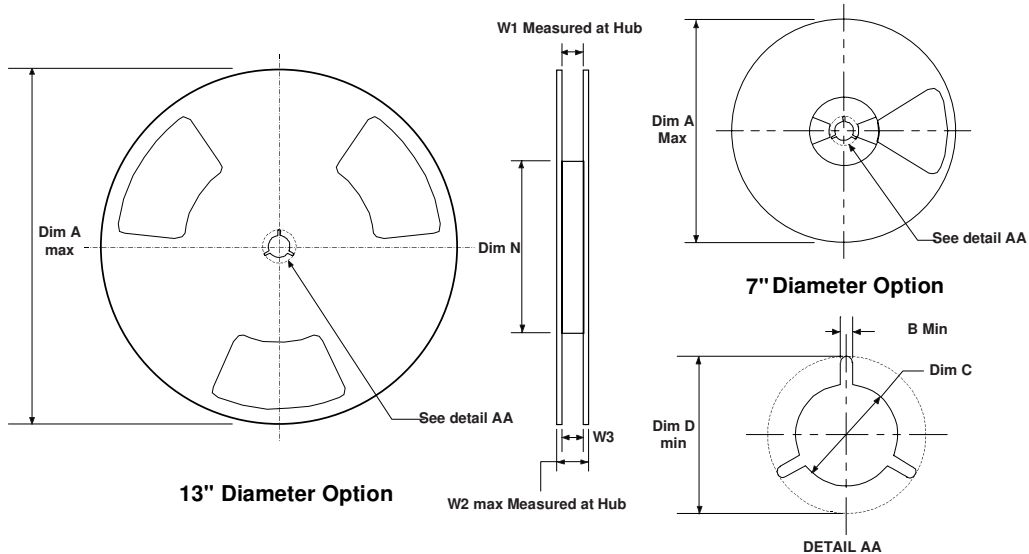


Sketch B (Top View)
Component Rotation



Sketch C (Top View)
Component lateral movement

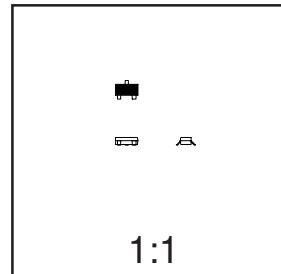
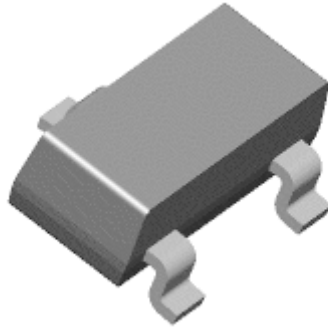
SOT-23 Reel Configuration: Figure 4.0



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

SOT-23 Tape and Reel Data and Package Dimensions, continued

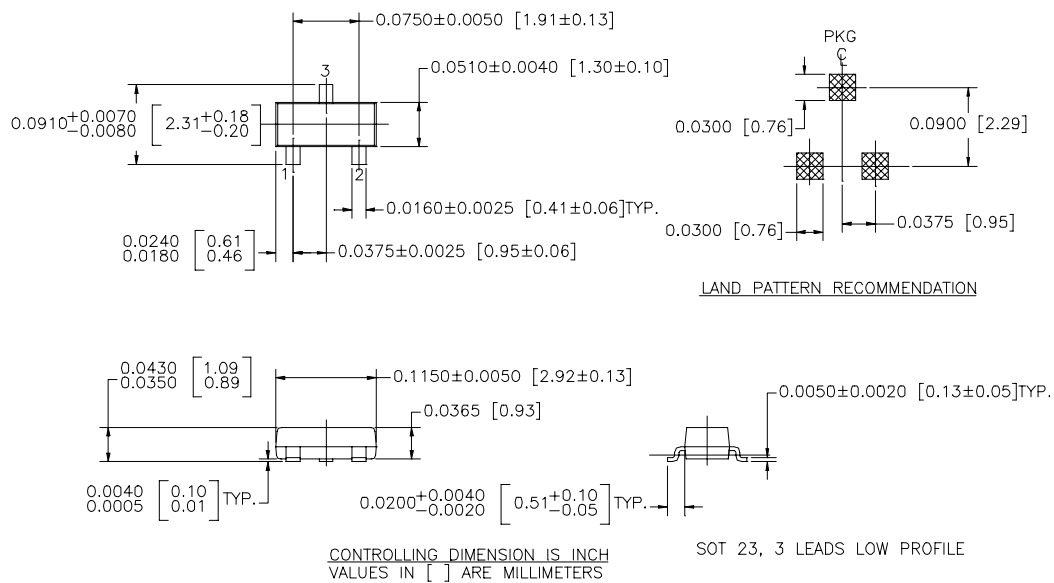
SOT-23 (FS PKG Code 49)



Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.0082



NOTE : UNLESS OTHERWISE SPECIFIED

- STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS
MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
- REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE G, DATED JUL 1993

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POP™
PowerTrench®
QFET™
QS™
Quiet Series™
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SuperSOT™-6

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