

# **TO-92 Packing Options / Ordering Instructions**

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## **ABSTRACT**

The TO-92 is an axial leaded, flat index package. The primary shipping methods are tape-and-reel, or radial ammo pack. These systems simplify the handling of the TO-92 for automated circuit board assembly systems.

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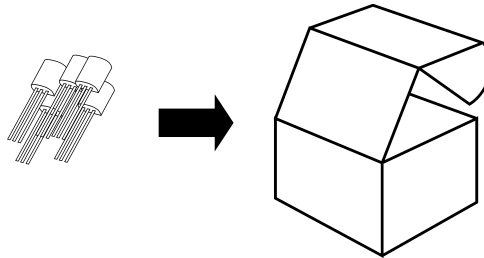
## **1 General Description**

The TO-92 is an axial leaded, flat index package. The primary shipping methods are tape-and-reel, or radial ammo pack. These systems simplify the handling of the TO-92 for automated circuit board assembly systems.

NOTE: Please check with your National local representative for details specific to your product needs.

### 1.1 Bulk Packing

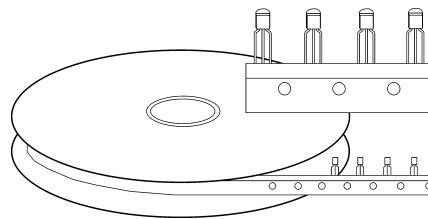
<b>Bulk Packing</b>	
Standard Packing Option with straight leads. For lead-free option use Flow NOPB. Quantities: 1,800 units per box	Example: LM2936Z-5.0 NOPB



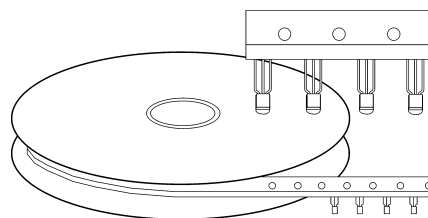
**Figure 1. Bulk Packing**

### 1.2 Taped Pack Option 1

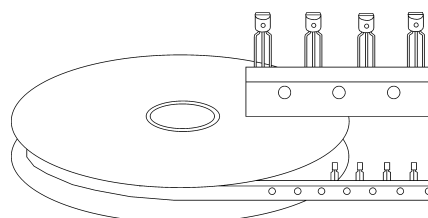
<b>Taped Pack Option 1</b>	
Flow T1, T2, T7 and T8 indicate Tape & Reel pack. For lead-free option use Flow LFT1, LFT2, LFT7 or LFT8. Quantities: 2,000 units per reel	Example: LM2936Z-5.0 LFT3



**Figure 2. LFT1 Tape & Reel Package Up, Flat Side Up**

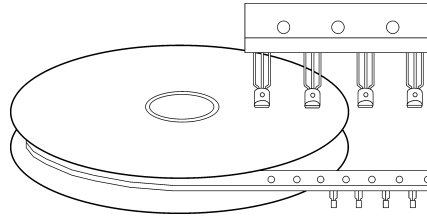


**Figure 3. LFT2 Tape & Reel Package Down, Flat Side Up.**



**Figure 4. LFT7 Tape & Reel Package Up, Flat Side Down**

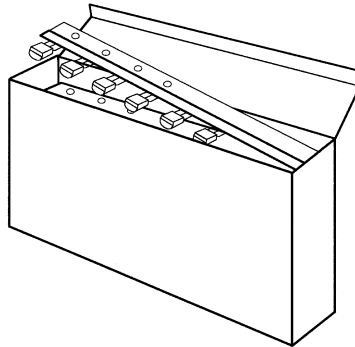
**Figure 5. Other options available on request**



**Figure 6. LFT8 Tape & Reel Package Down, Flat Side Down.**

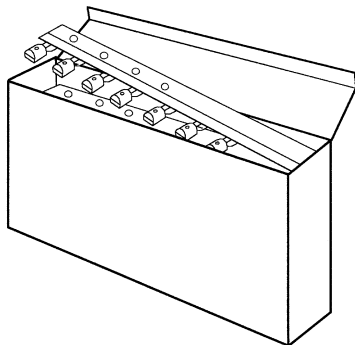
**1.3 Taped Pack Option 2**

<b>Taped Pack Option 2</b>	
Flow T3 and T4 indicate Tape & Ammo box pack. For lead-free option use Flow LFT3 or LFT4. Quantities: 2,000 units per Ammo Box	Example: LM2936Z-5.0 LFT3



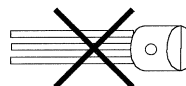
**Figure 7. LFT3 Radial Ammo Pack**  
Ammo Pack equivalent to option LFT1. Flat side of transistor on adhesive side of tape.

**Figure 8. Other options available on request**

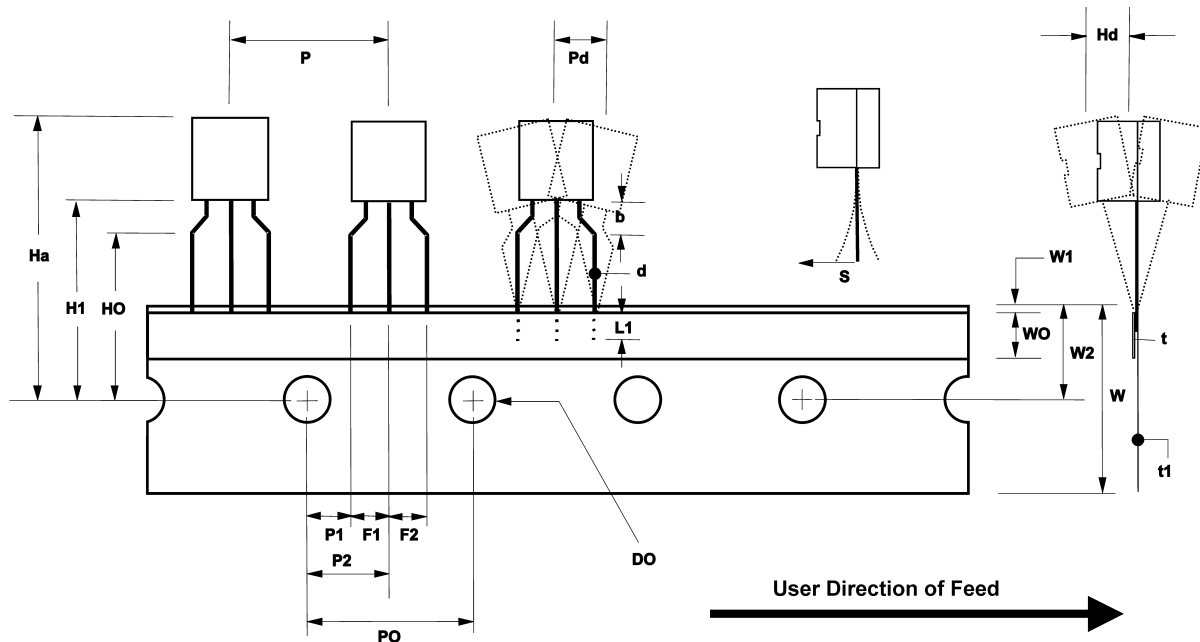


**Figure 9. LFT4 Radial Ammo Pack**  
Ammo Pack equivalent to option LFT7. Round side of transistor on adhesive side of tape.

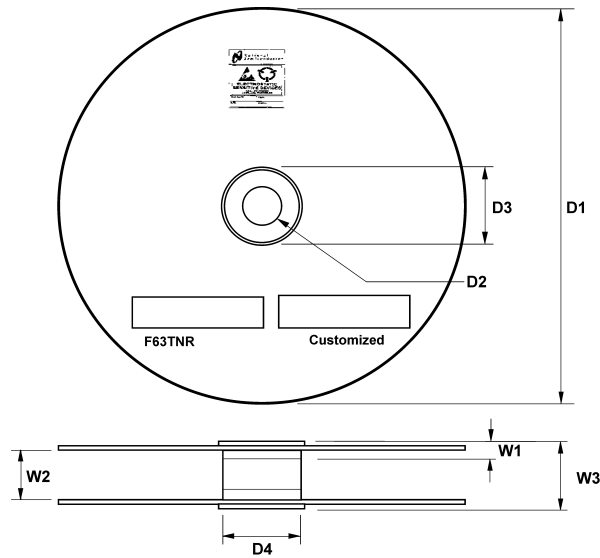
**Figure 10. NOTE: No straight leads available on taped product!**



### 1.4 TO-92 Tape and Reel Dimensions



Item Description	Symbol	Dimension (mm)
Base of Package to Lead Bend	b	3.00 ± 0.40
Component Height	Ha	24.00 ± 0.50
Lead Clinch Height	HO	16.00 ± 0.40
Component Base Height	H1	19.00 ± 0.40
Component Alignment ( side/side )	Pd	0.80 max
Component Alignment ( front/back )	Hd	1.00 max
Component Pitch	P	12.70 ± 0.60
Feed Hole Pitch	PO	12.70 ± 0.20
Hole Center to First Lead	P1	3.75 ± 0.30
Hole Center to Component Center	P2	6.35 ± 0.30
Lead Spread	F1/F2	2.60 +0.30/-0.20
Lead Thickness	d	0.45 +1.00/-0.05
Taped Lead Length	L1	2.50 max
Taped Lead Thickness	t	0.70 ± 0.20
Carrier Tape Thickness	t1	0.40 ± 0.05
Carrier Tape Width	W	18.50 ± 0.20
Hold - down Tape Width	W0	6.00 ± 0.40
Hold - down Tape position	W1	0.30 +0.20/-0.30
Feed Hole Position	W2	9.00 ± 0.40
Sprocket Hole Diameter	DO	4.00 ± 0.20
Lead Spring Out	S	0.40 max



Item Description	Symbol	Dimensions (mm)
Reel Diameter	D1	360.00 ± 1.00
Arbor Hole Diameter (Standard)	D2	30.50 ± 0.05
Arbor Hole Diameter (Small Hole)	D2	7.00 ± 0.05
Core Diameter	D3	90.00 ± 0.05
Hub Recess Inner Diameter	D4	76.00 ± 0.05
Hub Recess Depth	W1	10.70 ± 0.50
Flange to Flange Inner Width	W2	41.00 ± 1.00
Hub to Hub Center Width	W3	50.40 ± 1.70

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