TAK CHEONG®

SEMICONDUCTOR

500 mW LL-34 Hermetically Sealed Glass Fast Switching Diodes



SURFACE MOUNT
LL34

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	500	mW
T_{STG}	Storage Temperature Range	-65 to +200	°C
T_J	Operating Junction Temperature	+175	°C
W_{IV}	Working Inverse Voltage	75	V
I_O	Average Rectified Current	150	mA
I_{FM}	Non-repetitive Peak Forward Current	450	mA
I_{FSURGE}	Peak Forward Surge Current	2	A

These ratings are limiting values above which the serviceability of the diode may be impaired.

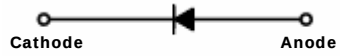
DEVICE MARKING DIAGRAM



Cathode Band Color : Black

Specification Features:

- Fast Switching Device (T_{RR} <4.0 nS)
- LL-34 (Mini-MELF) Package
- Surface Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All external surfaces are corrosion resistant and leads are readily solderable
- 1st band indicates negative polarity



ELECTRICAL SYMBOL

Electrical Characteristics

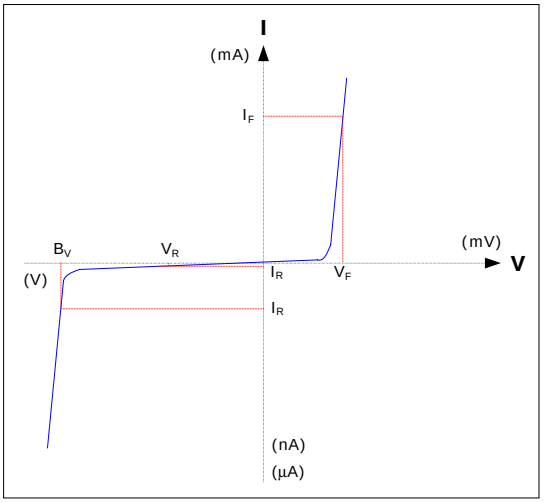
T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
B_V	Breakdown Voltage	I_R=100µA	100		Volts
		I_R=5µA	75		
I_R	Reverse Leakage Current	V_R=20V		25	nA
		V_R=75V		5	µA
V_F	Forward Voltage TCLL4448, TCLL914B	I_F=5mA	0.62	0.72	Volts
	TCLL4148	I_F=10mA		1.0	
	TCLL4448, TCLL914B	I_F=100mA		1.0	
T_{RR}	Reverse Recovery Time	I_F=I_R=10mA R_L=100Ω I_{RR}=1mA		4	nS
C	Capacitance	V_R=0V, f=1M_{HZ}		4	pF

Electrical Symbol Definition

Symbol	Parameter
B_V	Breakdown Voltage @ I_R
I_R	Reverse Leakage Current @ V_R
V_R	Reverse Voltage
I_F	Forward Current
V_F	Forward Voltage @ I_F

Typical Characteristics



Ordering Information

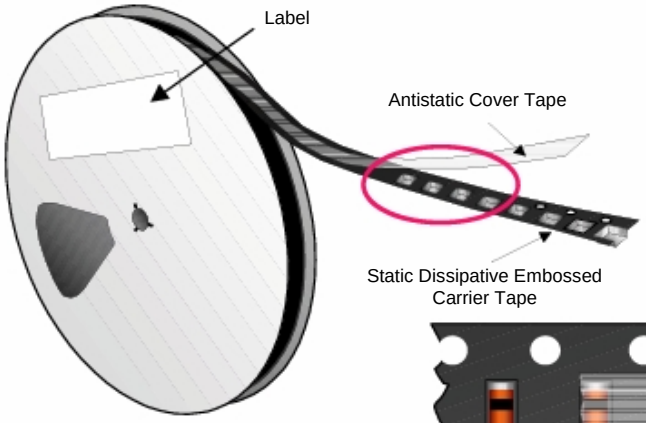
Pack Option	Package	Quantity
7" Reel	Tape and Reel	2,500
13" Reel	Tape and Reel	10,000
Others	(…contact Tak Cheong sales representatives)	

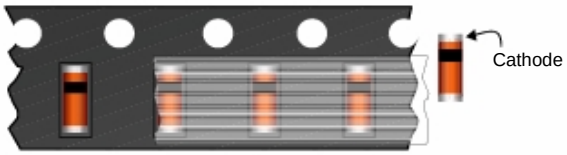
LL34 (Mini-MELF) Tape Packaging Standards

This standard practices for surface-mount tape packaging of leadless (Mini-MELF) components meets the requirements of EIA Standard RS-481-A.

LL-34 (Mini-MELF) Tape & Reel Packaging Information

LL-34 Packaging Outline

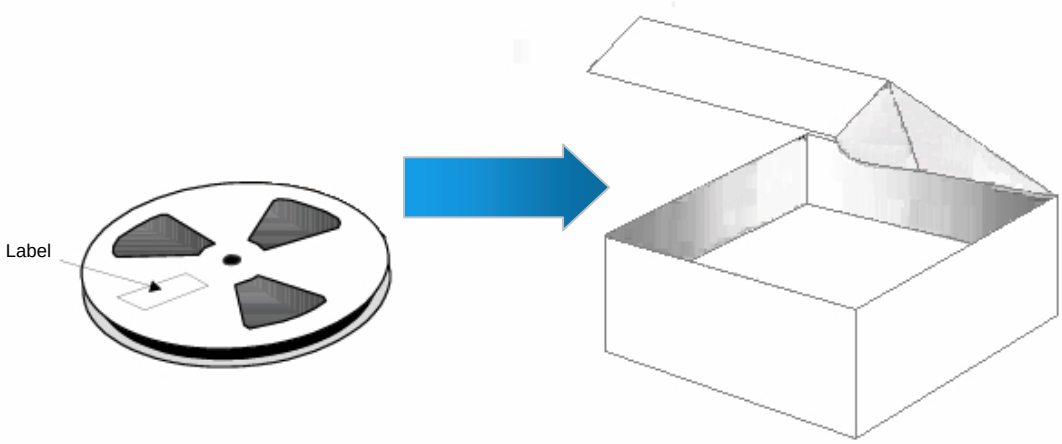




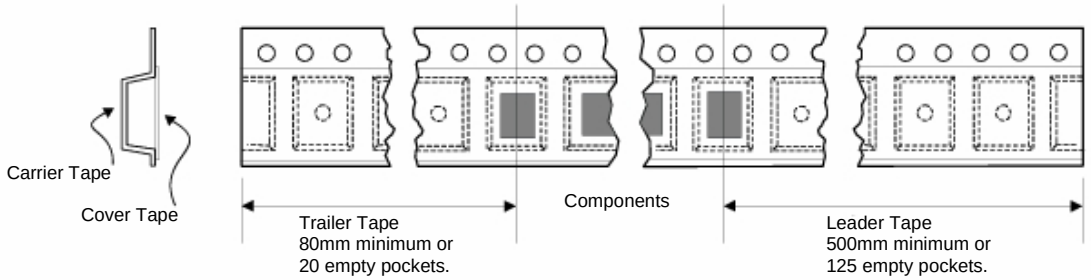
LL34 UNIT ORIENTATION

Packaging Description:

LL34 parts are shipped in tape and reel. The carrier tape is made from a dissipative (carton filled) polycarbonate resin. The cover tape is a multiplayer 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 2,500 units per 7" or 178cm diameter reel. The reels are blue in color and made of recyclable plastic. Other option comes in 10,000 units per 13" or 330cm diameter reel

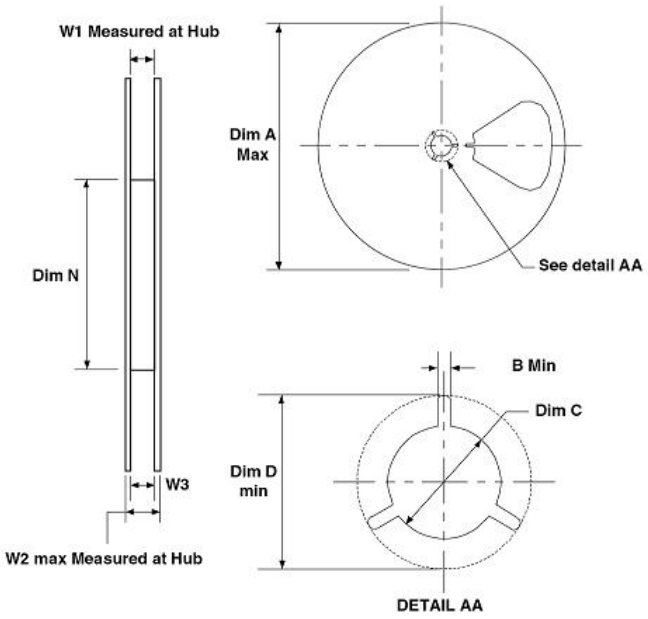


LL-34 Leader and Trailer



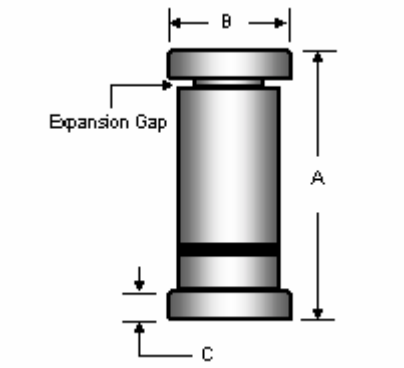
LL-34 (Mini-MELF) Tape & Reel Packaging Information

LL-34 Reel Outline



Dimensions are in millimeters									
Tape Size	**QTY Option**	**Dim A**	**Dim B**	**Dim C**	**Dim D**	**Dim N**	**W1**	**W2**	**W3**
8mm	2,500	178	1.5	13	20.2	55	8.4	14.4	7.9 – 10.9
	10,000	330	1.5	13	20.2	100	8.4	14.4	7.9 – 10.9

Package Outline

Package	Case Outline
LL34	

DIM	LL-34			
	Millimeters		Inches	
	Min	Max	Min	Max
A	3.302	3.505	0.130	0.138
B	1.397	1.499	0.055	0.059
C	0.350	0.500	0.014	0.020

Notes:

1. LL34 polarity denoted by a band.
2. 'Expansion Gap' has no relation to the location of polarity.