

## 500 mW LL-34 Hermetically Sealed Glass Fast Switching Diodes



SURFACE MOUNT  
LL34

### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	500	mW
$T_{STG}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	+175	$^\circ\text{C}$
$W_{IV}$	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 (Pulse Width = 1.0 $\mu\text{second}$ )	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 ( $T_{RR} < 4.0 \text{ nS}$ )
- LL-34 (Mini-MELF) Package
- Surface Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Terminals Are Readily Solderable
- RoHS Compliant
- Matte Tin (Sn) Terminal Finish
- Color band Indicates Negative Polarity

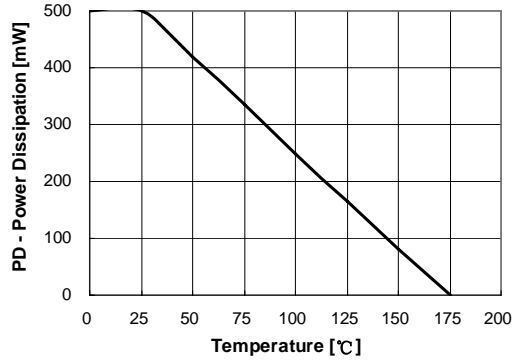


ELECTRICAL SYMBOL

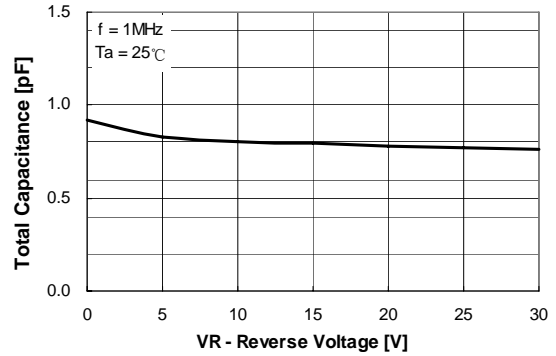
### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$B_V$	Breakdown Voltage	$I_R=100\mu\text{A}$ $I_R=5\mu\text{A}$	100 75		Volts
$I_R$	Reverse Leakage Current	$V_R=20\text{V}$ $V_R=75\text{V}$		25 5	nA $\mu\text{A}$
$V_F$	Forward Voltage	TCLL4448, TCLL914B $I_F=5\text{mA}$ TCLL4148 $I_F=10\text{mA}$ TCLL4448, TCLL914B $I_F=100\text{mA}$	0.62	0.72 1.0 1.0	Volts
$T_{RR}$	Reverse Recovery Time	$I_F=10\text{mA}$ , $V_R=6\text{V}$ $R_L=100\Omega$ $I_{RR}=1\text{mA}$		4	nS
$C$	Capacitance	$V_R=0\text{V}$ , $f=1\text{MHz}$		4	pF

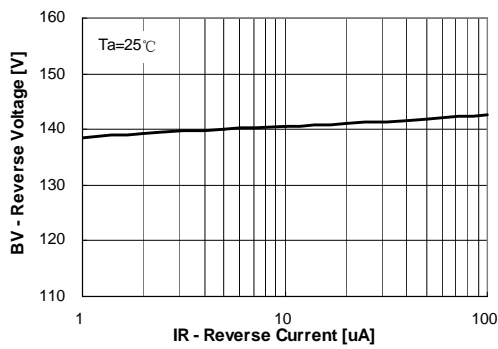
Typical Characteristics



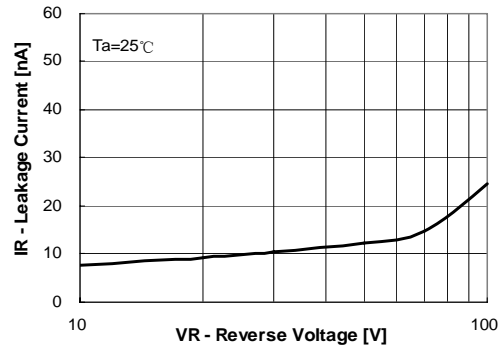
**Figure 1. Power Dissipation vs Ambient Temperature**  
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature



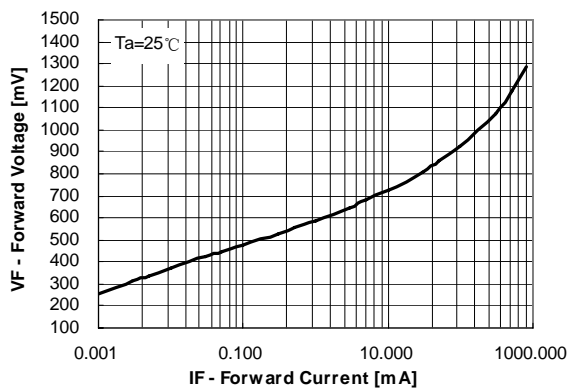
**Figure 2. Total Capacitance**



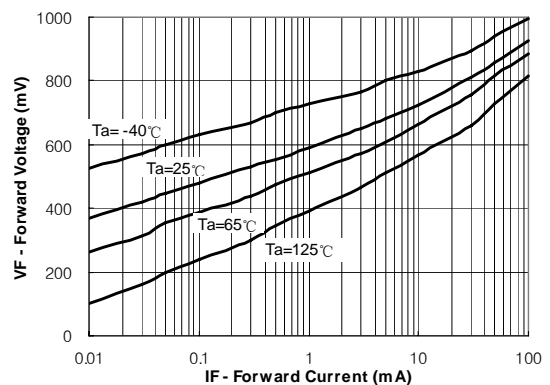
**Figure 3. Reverse Voltage vs Reverse Current**  
BV – 1.0uA to 100uA



**Figure 4. Reverse Current vs Reverse Voltage**  
IR – 10V to 100V

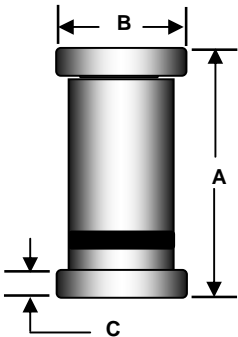


**Figure 5. Forward Voltage vs Forward Current**  
VF – 0.001mA to 800mA



**Figure 6. Forward Voltage vs Ambient Temperature**  
VF – 0.01mA to 100mA (-40 to +125 Deg C)

Package Outline

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LL34		<table border="1"> <thead> <tr> <th rowspan="3">DIM</th> <th colspan="4">LL-34</th> </tr> <tr> <th colspan="2">Millimeters</th> <th colspan="2">Inches</th> </tr> <tr> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3.302</td> <td>3.505</td> <td>0.130</td> <td>0.138</td> </tr> <tr> <td>B</td> <td>1.397</td> <td>1.499</td> <td>0.055</td> <td>0.059</td> </tr> <tr> <td>C</td> <td>0.350</td> <td>0.500</td> <td>0.014</td> <td>0.020</td> </tr> </tbody> </table>				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
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- Notes:**
1. All dimensions are within DO213AC JEDEC standard.
  2. LL-34 polarity denoted by cathode band.

**NOTICE**

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