

# LUR105 thru LUR160

## Glass Passivated Junction Ultra Fast Rectifiers

### Reverse Voltage 50 to 600V Forward Current 1.0A

#### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* High temperature metallurgically bonded construction
- \* Glass passivated chip
- \* Capable of meeting environmental standards of MIL-S-19500
- \* For use in high frequency rectifier circuits
- \* Fast switching for high efficiency
- \* High temperature soldering guaranteed: 260°C/10 seconds
- \* 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

#### Mechanical Data

**Case:** JEDEC DO-41, molded plastic body

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

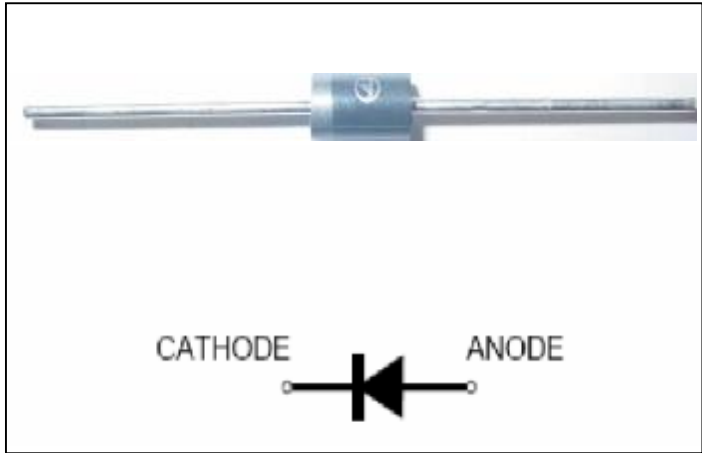
**Weight:** 0.011oz., 0.284 g

**Handling precaution:** None

#### 1. Electrical Characteristic

#### Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	LUR 105	LUR 110	LUR 115	LUR 120	LUR 140	LUR 150	LUR 160	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	400	500	600	V
Maximum RSM voltage	$V_{RSM}$	35	70	105	140	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	400	500	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at $T_A = 75^\circ\text{C}$	$I_{R(AV)}$	100							$\mu\text{A}$
Typical thermal resistance (Note 2)	$R_{\theta JA}$	60							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150							$^\circ\text{C}$



We declare that the material of product compliance with ROHS requirements

#### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	LUR 105	LUR 110	LUR 115	LUR 120	LUR 140	LUR 150	LUR 160	Unit	
Maximum Instantaneous Forward Voltage (IF = 1.0 Amps, $T_J = 25^\circ\text{C}$ )	$V_F$	0.93			1.25		1.5		V	
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths (Rated dc Voltage, $T_J = 125^\circ\text{C}$ ) (Rated dc Voltage, $T_J = 25^\circ\text{C}$ )	$I_R$	150				5.0				$\mu\text{A}$
Typical reverse recovery time (Note 1)	$t_{rr}$	35			50				ns	
Typical junction capacitance at 4.0V, 1MHz	$C_J$	45								PF

#### NOTES:

1.  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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## 2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

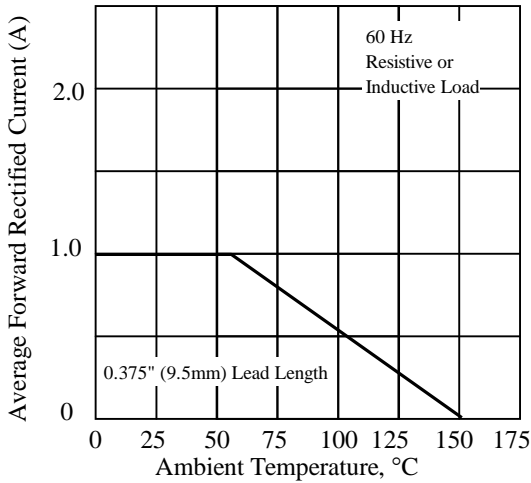


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

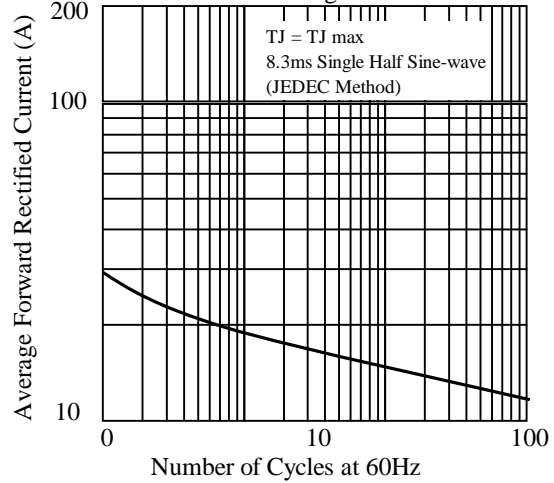


Fig 3. - Typical Instantaneous Forward Characteristics

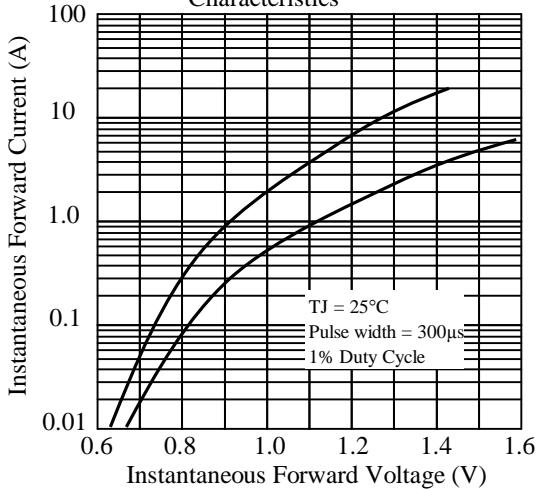


Fig 4. - Typical Reverse Characteristics

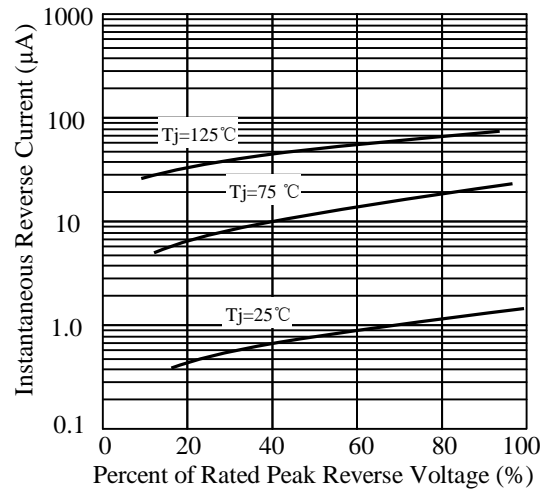


Fig 5. - typical transient thermal impedance

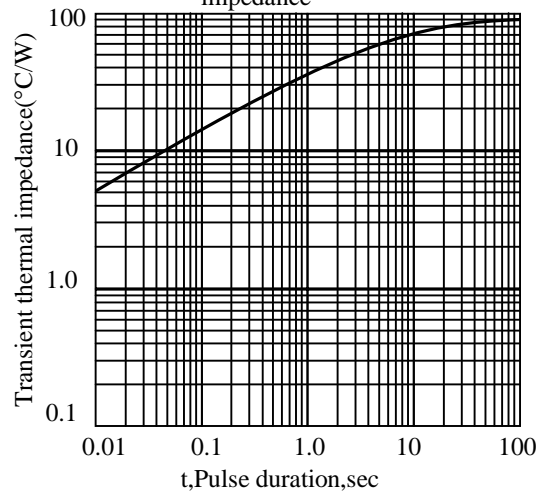
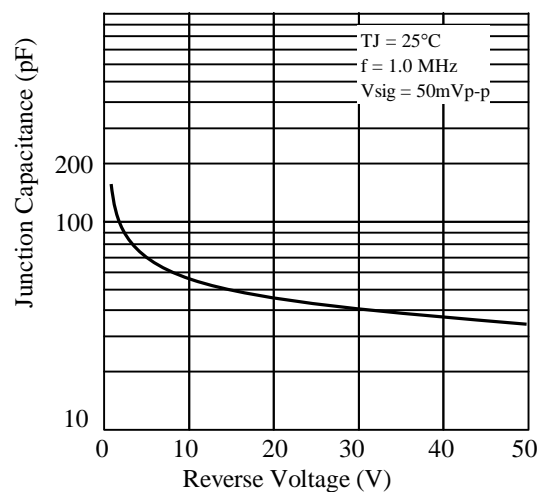
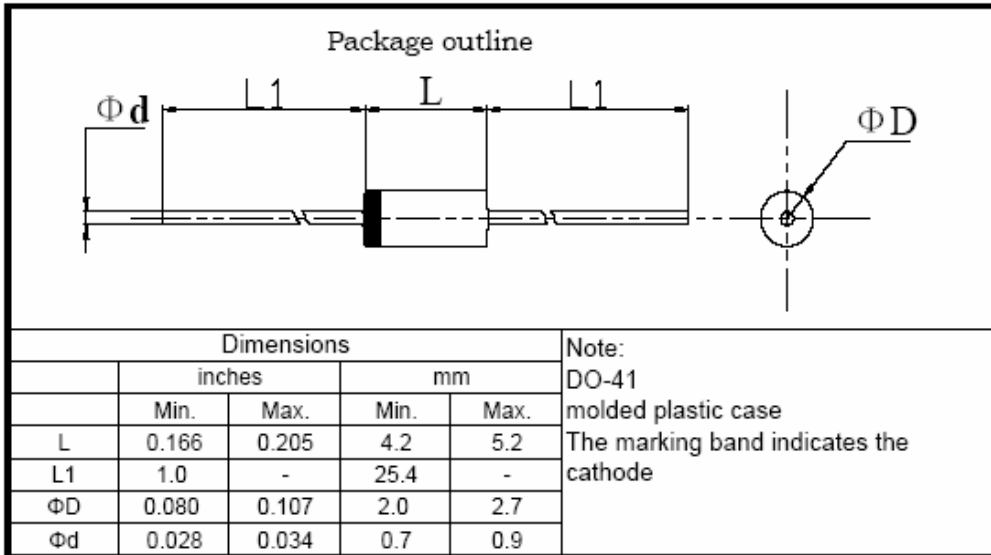


Fig 6. - Typical Junction Capacitance



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### 3. dimension:



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### 4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010-11-8
2	更新版面	周杰	2012-8-1