



## UZ1085

## LINEAR INTEGRATED CIRCUIT

### 3A ADJUSTABLE/FIXED LOW DROPOUT LINEAR REGULATOR

#### DESCRIPTION

The UZ1085-xx series are low dropout three-terminal regulators with 3A output current capability. These devices have been optimized for low voltage applications including VTT bus termination, where transient response and minimum input voltage are critical.

Current limit is trimmed to ensure specified output current and controlled short-circuit current. On-chip thermal limiting provides protection against any combination of overload and ambient temperature that would create excessive junction temperatures.

#### FEATURES

- \*Fast transient response
- \*Low dropout voltage at up to 3A
- \*Load regulation:0.05% typical
- \*Trimmed current limit
- \*On-chip thermal limiting

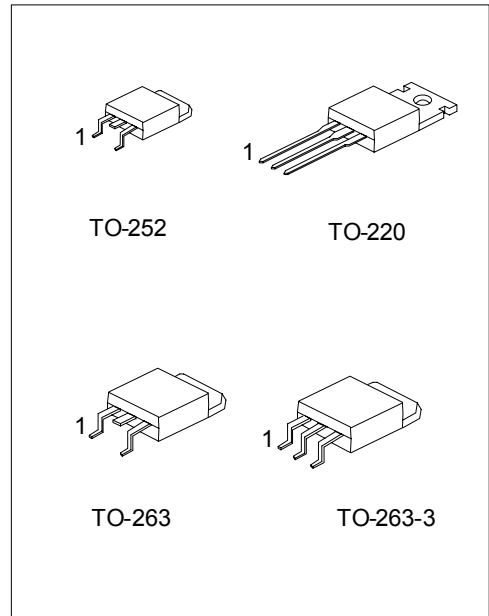
#### ORDERING INFORMATION

| Order Number      |                    | Package  | Pin Assignment |   |   | Packing   |
|-------------------|--------------------|----------|----------------|---|---|-----------|
| Normal            | Lead Free Plating  |          | 1              | 2 | 3 |           |
| UZ1085-xx-TA3-A-T | UZ1085L-xx-TA3-A-T | TO-220   | A/G            | O | I | Tube      |
| UZ1085-xx-TN3-A-R | UZ1085L-xx-TN3-A-R | TO-252   | A/G            | O | I | Tape Reel |
| UZ1085-xx-TN3-A-T | UZ1085L-xx-TN3-A-T | TO-252   | A/G            | O | I | Tube      |
| UZ1085-xx-TQ2-A-R | UZ1085L-xx-TQ2-A-R | TO-263   | A/G            | O | I | Tape Reel |
| UZ1085-xx-TQ2-A-T | UZ1085L-xx-TQ2-A-T | TO-263   | A/G            | O | I | Tube      |
| UZ1085-xx-TQ3-A-R | UZ1085L-xx-TQ3-A-R | TO-263-3 | A/G            | O | I | Tape Reel |
| UZ1085-xx-TQ3-A-T | UZ1085L-xx-TQ3-A-T | TO-263-3 | A/G            | O | I | Tube      |

Note: 1. xx: Output Voltage, refer to Marking Information.

2. A: ADJ (for adjustable regulator), G: GND (for fixed regulator)

|                           |   |   |
|---------------------------|---|---|
| <p>UZ1085L-xx-TA3-A-T</p> | <p>(1)Packing Type<br/>(2)Pin Assignment<br/>(3)Package Type<br/>(4)Output Voltage Code<br/>(5)Lead Plating</p> | <p>(1) R: Tape Reel, T: Tube<br/>(2) refer to Pin Assignment<br/>(3) TA3: TO-220, TN3: TO-252, TQ2: TO-263,<br/>TQ 3: TO-263-3<br/>(4) xx: refer to Marking Information<br/>(5) L: Lead Free Plating Blank: Pb/Sn</p> |
|---------------------------|---|---|



\*Pb-free plating product number: UZ1085L-xx

### MARKING INFORMATION

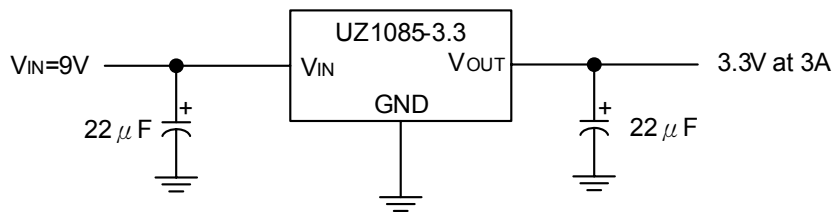
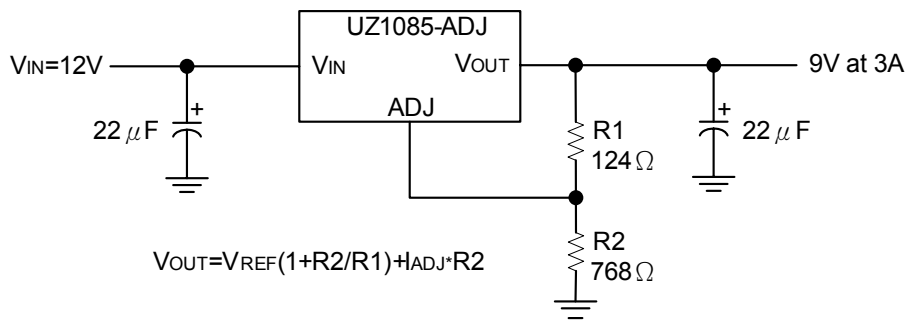
| PACKAGE  | VOLTAGE CODE | MARKING |
|----------|--------------|---------|
| TO-220   | 15 :1.5V     |         |
| TO-252   | 18 :1.8V     |         |
| TO-263   | 25 :2.5V     |         |
| TO-263   | 33 :3.3V     |         |
| TO-263-3 | 50 :5.0V     |         |
|          | AD :ADJ      |         |

### THERMAL DATA

| PARAMETER                        |        | SYMBOL        | RATINGS | UNIT |
|----------------------------------|--------|---------------|---------|------|
| Thermal Resistance Junction-Case | TO-252 | $\Theta_{JC}$ | 12      | °C/W |
|                                  | TO-220 |               | 4       |      |
|                                  | TO-263 |               | 4       |      |



## ■ TYPICAL APPLICATION CIRCUIT



## TYPICAL CHARACTERISTICS

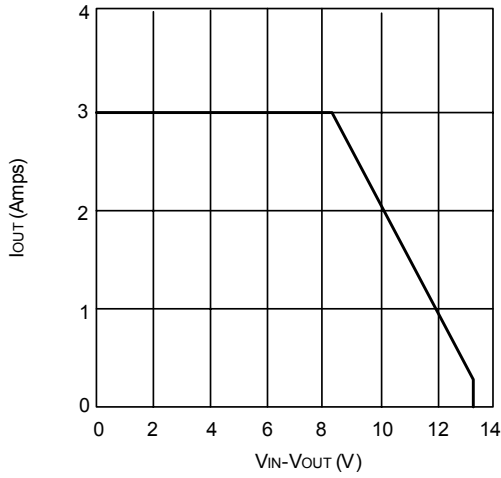


Figure 1. Absolute Maximum Safe Operating Area

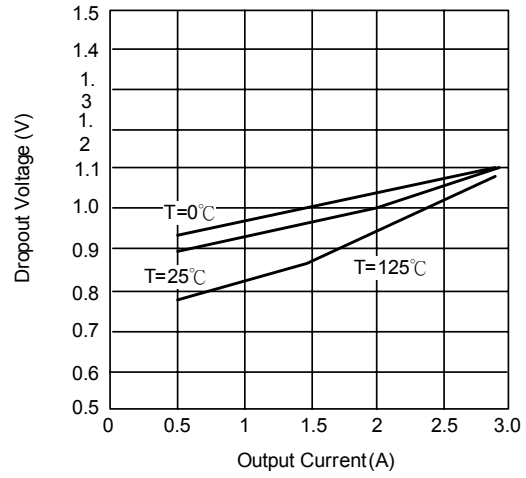


Figure 2. Dropout Voltage vs. Output Current

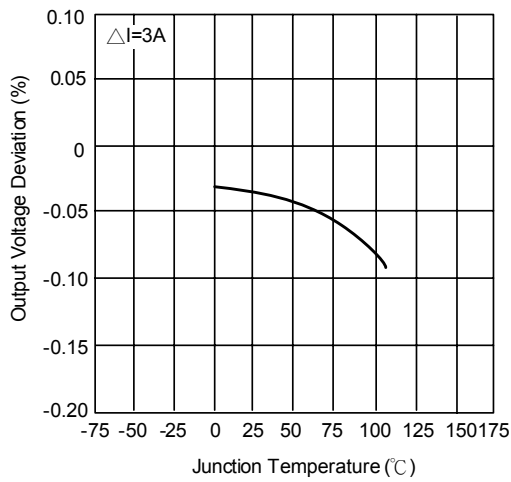


Figure 3. Load Regulation vs. Temperature

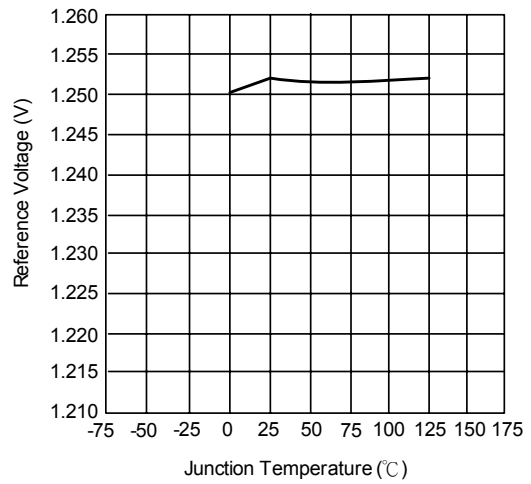


Figure 4. Reference Voltage vs. Temperature

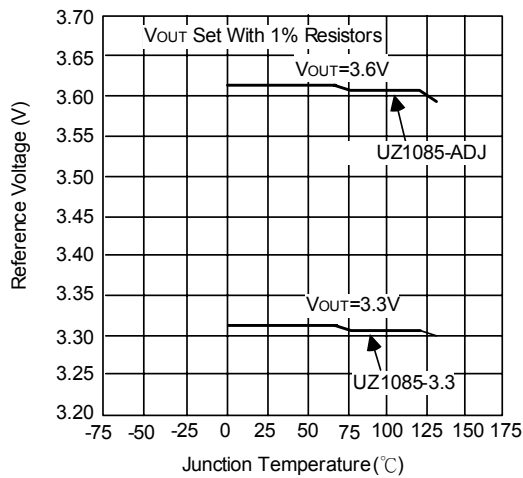


Figure 5. Output Voltage vs. Temperature

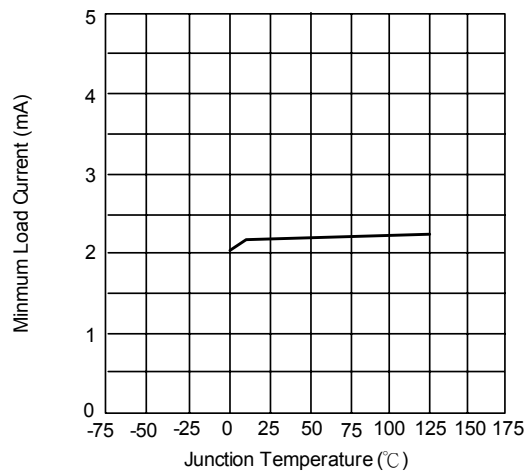


Figure 6. Minimum Load Current vs. Temperature

## ■ TYPICAL CHARACTERISTICS(Cont.)

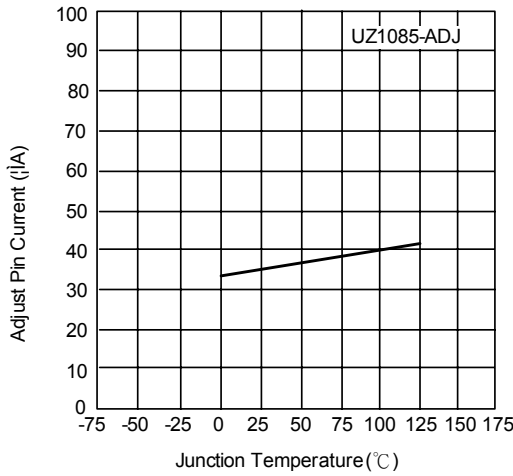


Figure 7. Adjust Pin Current vs. Temperature

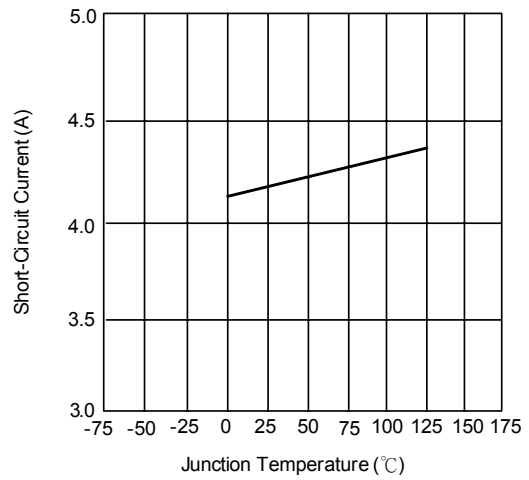


Figure 8. Short-Circuit Current vs. Temperature

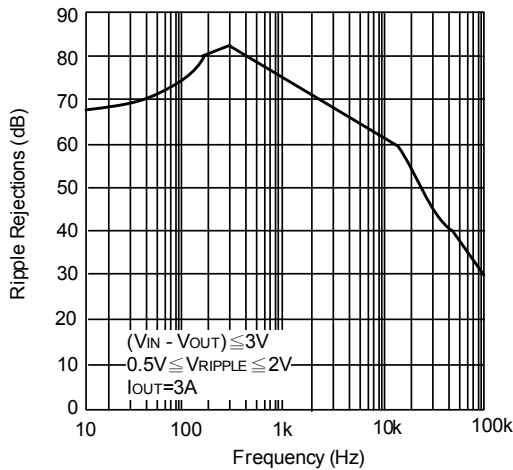


Figure 9. Ripple Rejection vs. Frequency

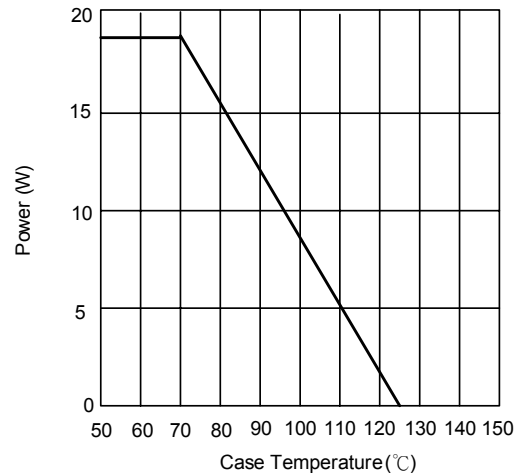


Figure 10. Maximum Power Dissipation

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