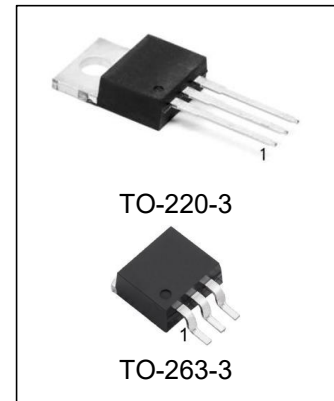


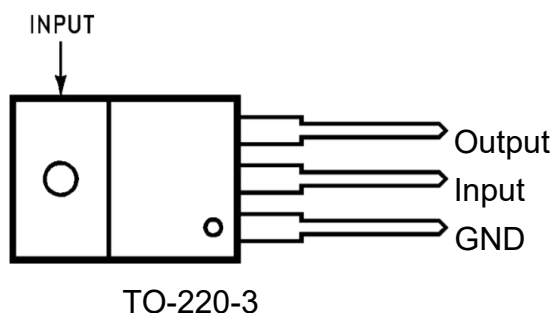
FEATURES

- Output current in excess of 1.5A
- Internal short current circuit limiting
- Internal thermal overload protection
- Output voltage offered of 4% tolerance

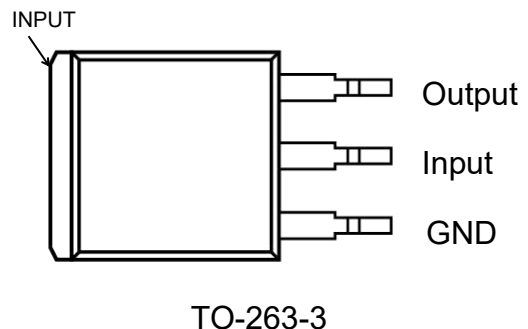


ORDERING INFORMATION

| DEVICE | Package Type | MARKING | Packing | Packing Qty |
|-------------|--------------|---------|---------|--------------|
| LM7905CT | TO-220-3 | LM7905C | TUBE | 1000pcs/box |
| LM7906CT | TO-220-3 | LM7906C | TUBE | 1000pcs/box |
| LM7908CT | TO-220-3 | LM7908C | TUBE | 1000pcs/box |
| LM7909CT | TO-220-3 | LM7909C | TUBE | 1000pcs/box |
| LM7912CT | TO-220-3 | LM7912C | TUBE | 1000pcs/box |
| LM7915CT | TO-220-3 | LM7915C | TUBE | 1000pcs/box |
| LM7918CT | TO-220-3 | LM7918C | TUBE | 1000pcs/box |
| LM7924CT | TO-220-3 | LM7924C | TUBE | 1000pcs/box |
| LM7905CS/TR | TO-263-3 | LM7905C | REEL | 500 pcs/reel |
| LM7906CS/TR | TO-263-3 | LM7906C | REEL | 500 pcs/reel |
| LM7908CS/TR | TO-263-3 | LM7908C | REEL | 500 pcs/reel |
| LM7909CS/TR | TO-263-3 | LM7909C | REEL | 500 pcs/reel |
| LM7912CS/TR | TO-263-3 | LM7912C | REEL | 500 pcs/reel |
| LM7915CS/TR | TO-263-3 | LM7915C | REEL | 500 pcs/reel |
| LM7918CS/TR | TO-263-3 | LM7918C | REEL | 500 pcs/reel |
| LM7924CS/TR | TO-263-3 | LM7924C | REEL | 500 pcs/reel |

PIN CONFIGURATION


TO-220-3



TO-263-3

ABSOLUTE MAXIMUM RATINGS

| Condition | VALUE | UNIT |
|---|----------|--------------------|
| Maximum input voltage at $T_J=25^{\circ}\text{C}$ | -35 | V |
| Maximum operating junction temperature | +125 | $^{\circ}\text{C}$ |
| Operating Temperature Range | 0 ~ +125 | $^{\circ}\text{C}$ |
| Lead Temperature (TL) (Soldering, 10 seconds) | +245 | $^{\circ}\text{C}$ |

Note: Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. Operating Ratings indicate conditions for which the device is intended to be functional, but specific performance is not ensured.

ELECTRICAL CHARACTERISTICS LM7905C

($V_{IN} = -10\text{V}$, $I_O = 500\text{mA}$, $C_{IN} = 2.2\mu\text{F}$, $C_O = 1.0\mu\text{F}$, $T_J = 25^{\circ}\text{C}$, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|--------------|--|-------|----------------------------|------|
| | | | Min | Max | |
| Output Voltage | V_O | $-7.0\text{V} \geq V_{IN} \geq -20\text{V}$ $5.0\text{mA} \leq I_O \leq 1.0\text{A}$ | -4.8 | -5.2 | V |
| Line Regulation | ΔU_V | $I_O = 100\text{mA}$, $-7.0\text{V} \geq V_{IN} \geq -25\text{V}$ $I_O = 100\text{mA}$, $-8.0\text{V} \geq V_{IN} \geq -12\text{V}$ $I_O = 500\text{mA}$, $-7.0\text{V} \geq V_{IN} \geq -25\text{V}$ $I_O = 500\text{mA}$, $-8.0\text{V} \geq V_{IN} \geq -12\text{V}$ | | 47.5 23.5 95 47.5 | mV |
| Load Regulation | ΔU_I | $5.0\text{mA} \leq I_O \leq 1.5\text{A}$ $250\text{mA} \leq I_O \leq 750\text{mA}$ | | 95 47.5 | mV |
| Quiescent Current | I_B | | | 7.8 | mA |
| Quiescent Current Change | ΔI_B | $-7.0\text{V} \geq V_{IN} \geq -25\text{V}$ $5.0\text{mA} \leq I_O \leq 1.5\text{A}$ | | 1.25 0.48 | mA |

ELECTRICAL CHARACTERISTICS LM7906C

 (V_{IN} = -11V, I_o = 500mA, C_{IN} = 2.2μF, C_o = 1.0μF, T_J = 25°C, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|-----------------|--|-------|-------------------------|------|
| | | | Min | Max | |
| Output Voltage | V _o | -8.0V ≥ V _{IN} ≥ -21V 5.0mA ≤ I _o ≤ 1.0 A | -5.76 | -6.24 | V |
| Line Regulation | ΔU _v | I _o = 100mA, -8.0V ≥ V _{IN} ≥ -25V I _o = 100mA, -9.0V ≥ V _{IN} ≥ -13V I _o = 500mA, -8.0V ≥ V _{IN} ≥ -25V I _o = 500mA, -9.0V ≥ V _{IN} ≥ -13V | | 57 28.5 114 57 | mV |
| Load Regulation | ΔU _I | 5.0mA ≤ I _o ≤ 1.5 A 250mA ≤ I _o ≤ 750mA | | 114 57 | mV |
| Quiescent Current | I _B | | | 7.8 | mA |
| Quiescent Current Change | ΔI _B | -8.0V ≥ V _{IN} ≥ -25V 5.0mA ≤ I _o ≤ 1.5 A | | 1.25 0.48 | mA |

ELECTRICAL CHARACTERISTICS LM7908C

 (V_{IN} = -14V, I_o = 500mA, C_{IN} = 2.2μF, C_o = 1.0μF, T_J = 25°C, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|-----------------|--|-------|-----------------------|------|
| | | | Min | Max | |
| Output Voltage | V _o | -10.5V ≥ V _{IN} ≥ -23V 5.0mA ≤ I _o ≤ 1.0 A | -7.68 | -8.32 | V |
| Line Regulation | ΔU _v | I _o = 100mA, -10.5V ≥ V _{IN} ≥ -25V I _o = 100mA, -11V ≥ V _{IN} ≥ -17V I _o = 500mA, -10.5V ≥ V _{IN} ≥ -25V I _o = 500mA, -11V ≥ V _{IN} ≥ -17V | | 76 38 152 76 | mV |
| Load Regulation | ΔU _I | 5.0mA ≤ I _o ≤ 1.5 A 250mA ≤ I _o ≤ 750mA | | 152 76 | mV |
| Quiescent Current | I _B | | | 7.8 | mA |
| Quiescent Current Change | ΔI _B | -10.5V ≥ V _{IN} ≥ -25V 5.0mA ≤ I _o ≤ 1.5 A | | 0.98 0.48 | mA |

ELECTRICAL CHARACTERISTICS LM7909C

(VIN = -16V, IO = 500mA, CIN = 2.2μF, CO = 1.0μF, TJ = 25°C, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|--------|--|-------|-----------------------|------|
| | | | Min | Max | |
| Output Voltage | VO | -10.5V ≥ VIN ≥ -25V 5.0mA ≤ IO ≤ 1.0 A | -8.60 | -9.40 | V |
| Line Regulation | ΔUV | IO = 100mA, -11.8V ≥ VIN ≥ -25V IO = 100mA, -12V ≥ VIN ≥ -20V IO = 500mA, -11.8V ≥ VIN ≥ -25V IO = 500mA, -12V ≥ VIN ≥ -20V | | 86 43 172 86 | mV |
| Load Regulation | ΔUI | 5.0mA ≤ IO ≤ 1.5 A 250mA ≤ IO ≤ 750mA | | 171 86 | mV |
| Quiescent Current | IB | | | 7.8 | mA |
| Quiescent Current Change | ΔIB | -10.5V ≥ VIN ≥ -25V 5.0mA ≤ IO ≤ 1.5 A | | 1.02 0.48 | mA |

ELECTRICAL CHARACTERISTICS LM7912C

(VIN = -19V, IO = 500mA, CIN = 2.2μF, CO = 1.0μF, TJ = 25°C, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|--------|--|--------|---------------------------|------|
| | | | Min | Max | |
| Output Voltage | VO | -14.5V ≥ VIN ≥ -21V 5.0mA ≤ IO ≤ 1.0 A | -11.52 | -12.48 | V |
| Line Regulation | ΔUV | IO = 100mA, -14.5V ≥ VIN ≥ -30V IO = 100mA, -16V ≥ VIN ≥ -22V IO = 500mA, -14.5V ≥ VIN ≥ -30V IO = 500mA, -16V ≥ VIN ≥ -22V | | 114 58.5 228 114 | mV |
| Load Regulation | ΔUI | 5.0mA ≤ IO ≤ 1.5 A 250mA ≤ IO ≤ 750mA | | 228 114 | mV |
| Quiescent Current | IB | | | 7.8 | mA |
| Quiescent Current Change | ΔIB | -14.5V ≥ VIN ≥ -30V 5.0mA ≤ IO ≤ 1.5 A | | 1.25 0.48 | mA |

ELECTRICAL CHARACTERISTICS LM7915C

 ($V_{IN} = -23V$, $I_o = 500mA$, $C_{IN} = 2.2\mu F$, $C_o = 1.0\mu F$, $T_J = 25^\circ C$, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|--------------|--|-------|-------------------------|------|
| | | | Min | Max | |
| Output Voltage | V_o | $-17.5V \geq V_{IN} \geq -30V$ $5.0mA \leq I_o \leq 1.0 A$ | -14.4 | -15.6 | V |
| Line Regulation | ΔU_v | $I_o = 100mA$, $-17.5V \geq V_{IN} \geq -30V$ $I_o = 100mA$, $-20V \geq V_{IN} \geq -26V$ $I_o = 500mA$, $-17.5V \geq V_{IN} \geq -30V$ $I_o = 500mA$, $-20V \geq V_{IN} \geq -26V$ | | 142 71 285 142 | mV |
| Load Regulation | ΔU_l | $5.0mA \leq I_o \leq 1.5 A$ $250mA \leq I_o \leq 750mA$ | | 285 142 | mV |
| Quiescent Current | I_B | | | 7.8 | mA |
| Quiescent Current Change | ΔI_B | $-17.5V \geq V_{IN} \geq -30V$ $5.0mA \leq I_o \leq 1.5 A$ | | 0.98 0.48 | mA |

ELECTRICAL CHARACTERISTICS LM7918C

 ($V_{IN} = -27V$, $I_o = 500mA$, $C_{IN} = 2.2\mu F$, $C_o = 1.0\mu F$, $T_J = 25^\circ C$, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|--------------|--|--------|---------------------------|------|
| | | | Min | Max | |
| Output Voltage | V_o | $-21V \geq V_{IN} \geq -33V$ $5.0mA \leq I_o \leq 1.0 A$ | -17.28 | -18.72 | V |
| Line Regulation | ΔU_v | $I_o = 100mA$, $-21V \geq V_{IN} \geq -33V$ $I_o = 100mA$, $-24V \geq V_{IN} \geq -30V$ $I_o = 500mA$, $-21V \geq V_{IN} \geq -33V$ $I_o = 500mA$, $-24V \geq V_{IN} \geq -30V$ | | 171 85.5 342 171 | mV |
| Load Regulation | ΔU_l | $5.0mA \leq I_o \leq 1.5 A$ $250mA \leq I_o \leq 750mA$ | | 342 171 | mV |
| Quiescent Current | I_B | | | 7.8 | mA |
| Quiescent Current Change | ΔI_B | $-21V \geq V_{IN} \geq -33V$ $5.0mA \leq I_o \leq 1.5 A$ | | 0.98 0.48 | mA |

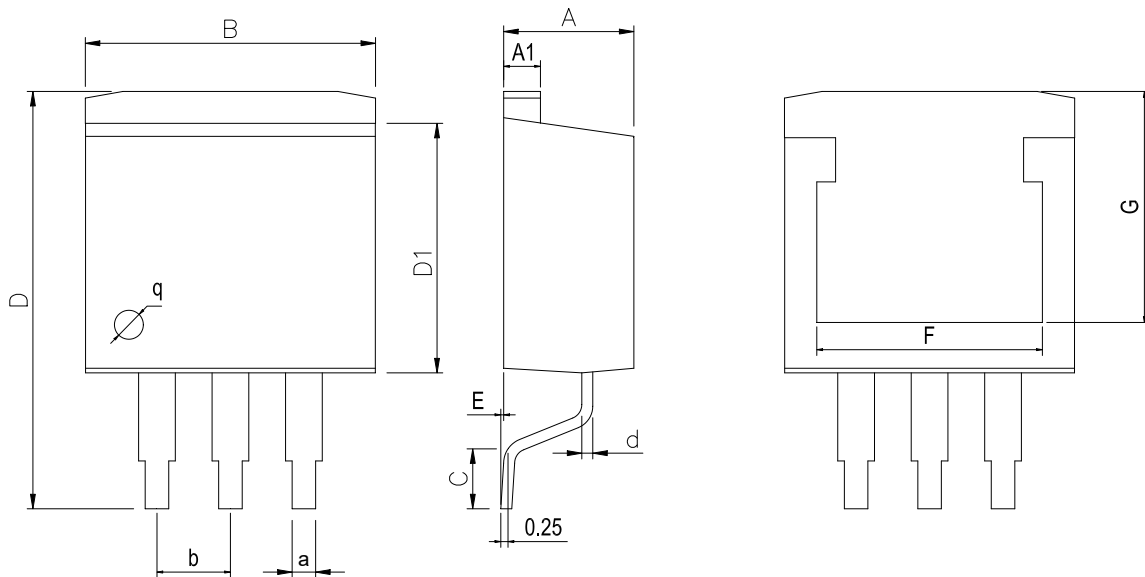
ELECTRICAL CHARACTERISTICS LM7924C

 ($V_{IN} = -33V$, $I_o = 500mA$, $C_{IN} = 2.2\mu F$, $C_o = 1.0\mu F$, $T_J = 25^\circ C$, unless otherwise noted)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | NORMS | | UNIT |
|--------------------------|--------------|--|-------|--------------------------|------|
| | | | Min | Max | |
| Output Voltage | V_o | $-27V \geq V_{IN} \geq -38V$ $5.0mA \leq I_o \leq 1.0 A$ | -23 | -25 | V |
| Line Regulation | ΔU_v | $I_o = 100mA$, $-27V \geq V_{IN} \geq -38V$ $I_o = 100mA$, $-30V \geq V_{IN} \geq -36V$ $I_o = 500mA$, $-27V \geq V_{IN} \geq -38V$ $I_o = 500mA$, $-30V \geq V_{IN} \geq -36V$ | | 228 114 446 228 | mV |
| Load Regulation | ΔU_l | $5.0mA \leq I_o \leq 1.5 A$ $250mA \leq I_o \leq 750mA$ | | 446 228 | mV |
| Quiescent Current | I_B | | | 7.8 | mA |
| Quiescent Current Change | ΔI_B | $-27V \geq V_{IN} \geq -33V$ $5.0mA \leq I_o \leq 1.5 A$ | | 0.98 0.48 | mA |

PHYSICAL DIMENSIONS

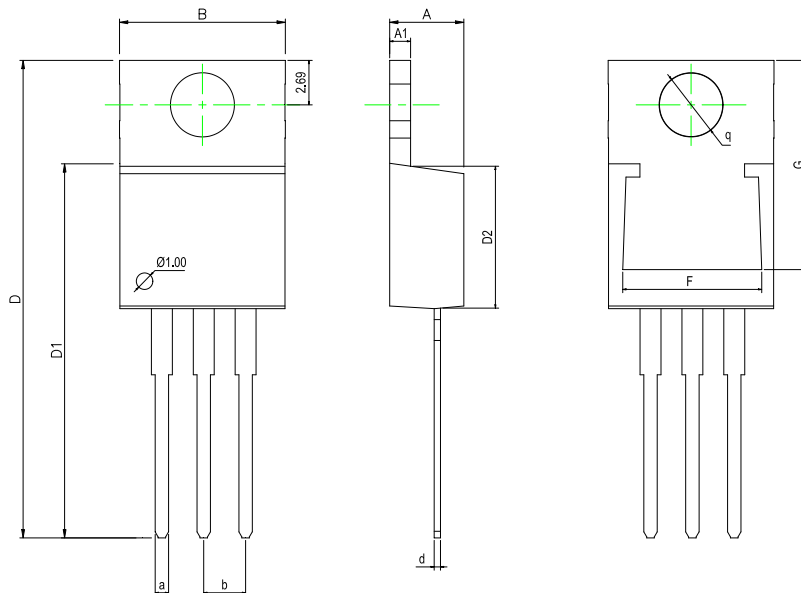
TO-263-3



Dimensions In Millimeters(TO-263-3)

| Symbol: | A | A1 | B | C | D | D1 | E | F | G | a | b |
|---------|------|------|------|------|------|------|-------|-------|------|------|---------|
| Min: | 4.45 | 1.22 | 10 | 1.89 | 13.7 | 8.38 | 0 | 8.332 | 7.70 | 0.71 | 2.54BSC |
| Max: | 4.62 | 1.32 | 10.4 | 2.19 | 14.6 | 8.89 | 0.305 | 8.552 | 8.10 | 0.97 | |

TO-220-3



Dimensions In Millimeters(TO-220-3)

| Symbol: | A | A1 | B | D | D1 | D2 | F | G | a | d | b | q |
|---------|------|------|------|------|-------|------|------|-------|------|------|--------|---------|
| Min: | 4.45 | 1.22 | 10 | 28.2 | 22.22 | 8.50 | 8.30 | 12.55 | 0.71 | 0.33 | 2.54BS | 3.80TYP |
| Max: | 4.62 | 1.32 | 10.4 | 28.9 | 22.62 | 9.10 | 8.55 | 12.75 | 0.97 | 0.42 | C | |

REVISION HISTORY

| DATE | REVISION | PAGE |
|-----------|---|------|
| 2018-1-5 | New | 1-9 |
| 2023-9-13 | Update Lead Temperature、 Update Package Type、 Add annotation for Maximum Ratings. | 1、 2 |

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