



**THE DATASHEET OF
MC79L12ACPRPG**



MC79L00A Series

100 mA Negative Voltage Regulators

The MC79L00A Series negative voltage regulators are inexpensive, easy-to-use devices suitable for numerous applications requiring up to 100 mA. Like the higher powered MC7900 Series negative regulators, this series features thermal shutdown and current limiting, making them remarkably rugged. In most applications, no external components are required for operation.

The MC79L00A devices are useful for on-card regulation or any other application where a regulated negative voltage at a modest current level is needed. These regulators offer substantial advantage over the common resistor/Zener diode approach.

Features

- No External Components Required
- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- Low Cost
- Complementary Positive Regulators Offered (MC78L00 Series)
- Pb-Free Packages are Available



* Automotive temperature range selections are available with special test conditions and additional tests in 5, 12 and 15 V devices. Contact your local ON Semiconductor sales office for information.

Figure 1. Representative Schematic Diagram



ON Semiconductor®

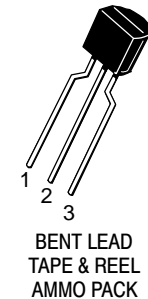
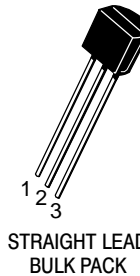
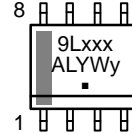
www.onsemi.com

THREE-TERMINAL LOW CURRENT NEGATIVE FIXED VOLTAGE REGULATORS

MARKING DIAGRAMS

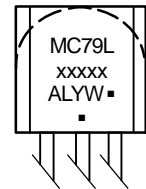


- Pin 1. V_{out}
- 2. V_{in}
- 3. V_{in}
- 4. NC
- 5. GND
- 6. V_{in}
- 7. V_{in}
- 8. NC



TO-92
P SUFFIX
CASE 29

- Pin 1. Ground
- 2. Input
- 3. Output



- xxx = Specific Device Code
- A = Assembly Location
- L = Wafer Lot
- Y = Year
- W = Work Week
- y = B or C
- = Pb-Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

See detailed ordering and shipping information in the package dimensions section on page 7 of this data sheet.

MC79L00A Series

MAXIMUM RATINGS ($T_A = +25^\circ\text{C}$, unless otherwise noted.)

| Rating | Symbol | Value | Unit |
|--|--|---------------------------------|---|
| Input Voltage (-5 V) (-12, -15, -18 V) (-24 V) | V_I | -30 -35 -40 | Vdc |
| Power Dissipation Case 29 (TO-92 Type) $T_A = 25^\circ\text{C}$ Thermal Resistance, Junction-to-Ambient Thermal Resistance, Junction-to-Case | PD $R_{\theta JA}$ $R_{\theta JC}$ | Internally Limited 160 83 | W $^\circ\text{C/W}$ $^\circ\text{C/W}$ |
| Case 751 (SOIC-8 Type) (Note 1) $T_A = 25^\circ\text{C}$ Thermal Resistance, Junction-to-Ambient Thermal Resistance, Junction-to-Case | PD $R_{\theta JA}$ $R_{\theta JC}$ | Internally Limited 180 45 | W $^\circ\text{C/W}$ $^\circ\text{C/W}$ |
| Storage Temperature Range | T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Junction Temperature | T_J | +150 | $^\circ\text{C}$ |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. SOIC-8 Junction-to-Ambient Thermal Resistance is for minimum recommended pad size. Refer to Figure 9 for Thermal Resistance variation versus pad size.

*This device series contains ESD protection and exceeds the following tests:

Human Body Model 2000 V per MIL_STD_883, Method 3015
Machine Model Method 200 V.

ELECTRICAL CHARACTERISTICS ($V_I = -10\text{ V}$, $I_O = 40\text{ mA}$, $C_I = 0.33\ \mu\text{F}$, $C_O = 0.1\ \mu\text{F}$, $-40^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAB), $0^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAC)).

| Characteristics | Symbol | MC79L05AC, AB | | | Unit |
|---|---------------------|----------------|------|----------------|---------------|
| | | Min | Typ | Max | |
| Output Voltage ($T_J = +25^\circ\text{C}$) | V_O | -4.8 | -5.0 | -5.2 | Vdc |
| Input Regulation ($T_J = +25^\circ\text{C}$) -7.0 Vdc $\geq V_I \geq -20\text{ Vdc}$ -8.0 Vdc $\geq V_I \geq -20\text{ Vdc}$ | Reg_{line} | - | - | 150 100 | mV |
| Load Regulation $T_J = +25^\circ\text{C}$, $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | Reg_{load} | - | - | 60 30 | mV |
| Output Voltage -7.0 Vdc $\geq V_I \geq -20\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ $V_I = -10\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 70\text{ mA}$ | V_O | -4.75 -4.75 | - | -5.25 -5.25 | Vdc |
| Input Bias Current ($T_J = +25^\circ\text{C}$) ($T_J = +125^\circ\text{C}$) | I_{IB} | - | - | 6.0 5.5 | mA |
| Input Bias Current Change -8.0 Vdc $\geq V_I \geq -20\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | I_{IB} | - | - | 1.5 0.1 | mA |
| Output Noise Voltage ($T_A = +25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$) | V_n | - | 40 | - | μV |
| Ripple Rejection ($-8.0 \geq V_I \geq -18\text{ Vdc}$, $f = 120\text{ Hz}$, $T_J = +25^\circ\text{C}$) | RR | 41 | 49 | - | dB |
| Dropout Voltage ($I_O = 40\text{ mA}$, $T_J = +25^\circ\text{C}$) | $ V_I - V_O $ | - | 1.7 | - | Vdc |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

MC79L00A Series

ELECTRICAL CHARACTERISTICS ($V_I = -19\text{ V}$, $I_O = 40\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$, $-40^\circ\text{C} < T_J + 125^\circ\text{C}$ (for MC79LXXAB), $0^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAC)).

| Characteristics | Symbol | MC79L12AC, AB | | | Unit |
|--|----------------------------|----------------|-----|----------------|---------------|
| | | Min | Typ | Max | |
| Output Voltage ($T_J = +25^\circ\text{C}$) | V_O | -11.5 | -12 | -12.5 | Vdc |
| Input Regulation ($T_J = +25^\circ\text{C}$) -14.5 Vdc $\geq V_I \geq -27\text{ Vdc}$ -16 Vdc $\geq V_I \geq -27\text{ Vdc}$ | Reg_{line} | - | - | 250 200 | mV |
| Load Regulation $T_J = +25^\circ\text{C}$, $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | Reg_{load} | - | - | 100 50 | mV |
| Output Voltage -14.5 Vdc $\geq V_I \geq -27\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ $V_I = -19\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 70\text{ mA}$ | V_O | -11.4 -11.4 | - | -12.6 -12.6 | Vdc |
| Input Bias Current ($T_J = +25^\circ\text{C}$) ($T_J = +125^\circ\text{C}$) | I_{IB} | - | - | 6.5 6.0 | mA |
| Input Bias Current Change -16 Vdc $\geq V_I \geq -27\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | I_{IB} | - | - | 1.5 0.2 | mA |
| Output Noise Voltage ($T_A = +25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$) | V_n | - | 80 | - | μV |
| Ripple Rejection ($-15 \leq V_I \leq -25\text{ Vdc}$, $f = 120\text{ Hz}$, $T_J = +25^\circ\text{C}$) | RR | 37 | 42 | - | dB |
| Dropout Voltage ($I_O = 40\text{ mA}$, $T_J = +25^\circ\text{C}$) | $ V_I - V_O $ | - | 1.7 | - | Vdc |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

ELECTRICAL CHARACTERISTICS ($V_I = -23\text{ V}$, $I_O = 40\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$, $-40^\circ\text{C} < T_J + 125^\circ\text{C}$ (for MC79LXXAB), $0^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAC)).

| Characteristics | Symbol | MC79L15AC, AB | | | Unit |
|---|----------------------------|------------------|-----|------------------|---------------|
| | | Min | Typ | Max | |
| Output Voltage ($T_J = +25^\circ\text{C}$) | V_O | -14.4 | -15 | -15.6 | Vdc |
| Input Regulation ($T_J = +25^\circ\text{C}$) -17.5 Vdc $\geq V_I \geq -30\text{ Vdc}$ -20 Vdc $\geq V_I \geq -30\text{ Vdc}$ | Reg_{line} | - | - | 300 250 | mV |
| Load Regulation $T_J = +25^\circ\text{C}$, $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | Reg_{load} | - | - | 150 75 | mV |
| Output Voltage -17.5 Vdc $\geq V_I \geq -\text{Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ $V_I = -23\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 70\text{ mA}$ | V_O | -14.25 -14.25 | - | -15.75 -15.75 | Vdc |
| Input Bias Current ($T_J = +25^\circ\text{C}$) ($T_J = +125^\circ\text{C}$) | I_{IB} | - | - | 6.5 6.0 | mA |
| Input Bias Current Change -20 Vdc $\geq V_I \geq -30\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | ΔI_{IB} | - | - | 1.5 0.1 | mA |
| Output Noise Voltage ($T_A = +25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$) | V_n | - | 90 | - | μV |
| Ripple Rejection ($-18.5 \leq V_I \leq -28.5\text{ Vdc}$, $f = 120\text{ Hz}$) | RR | 34 | 39 | - | dB |
| Dropout Voltage $I_O = 40\text{ mA}$, $T_J = +25^\circ\text{C}$ | $ V_I - V_O $ | - | 1.7 | - | Vdc |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

MC79L00A Series

ELECTRICAL CHARACTERISTICS ($V_I = -27\text{ V}$, $I_O = 40\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$, $-40^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAB), $0^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAC), unless otherwise noted).

| Characteristics | Symbol | MC79L18AC | | | Unit |
|---|----------------------------|---------------------|-------------|----------------------|---------------|
| | | Min | Typ | Max | |
| Output Voltage ($T_J = +25^\circ\text{C}$) | V_O | -17.3 | -18 | -18.7 | Vdc |
| Input Regulation ($T_J = +25^\circ\text{C}$) -20.7 Vdc $\geq V_I \geq -33\text{ Vdc}$ -21.4 Vdc $\geq V_I \geq -33\text{ Vdc}$ -22 Vdc $\geq V_I \geq -33\text{ Vdc}$ -21 Vdc $\geq V_I \geq -33\text{ Vdc}$ | Reg_{line} | - | - | 325 - - 275 | mV |
| Load Regulation $T_J = +25^\circ\text{C}$, $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | Reg_{load} | - | - | 170 85 | mV |
| Output Voltage -20.7 Vdc $\geq V_I \geq -33\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ -21.4 Vdc $\geq V_I \geq -33\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ $V_I = -27\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 70\text{ mA}$ | V_O | -17.1 - -17.1 | - - - | -18.9 - -18.9 | Vdc |
| Input Bias Current ($T_J = +25^\circ\text{C}$) ($T_J = +125^\circ\text{C}$) | I_{IB} | - - | - - | 6.5 6.0 | mA |
| Input Bias Current Change -21 Vdc $\geq V_I \geq -33\text{ Vdc}$ -27 Vdc $\geq V_I \geq -33\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | I_{IB} | - - - | - - - | 1.5 - 0.1 | mA |
| Output Noise Voltage ($T_A = +25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$) | V_n | - | 150 | - | μV |
| Ripple Rejection ($-23 \leq V_I \leq -33\text{ Vdc}$, $f = 120\text{ Hz}$, $T_J = +25^\circ\text{C}$) | RR | 33 | 48 | - | dB |
| Dropout Voltage $I_O = 40\text{ mA}$, $T_J = +25^\circ\text{C}$ | $ V_I - V_O $ | - | 1.7 | - | Vdc |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

ELECTRICAL CHARACTERISTICS ($V_I = -33\text{ V}$, $I_O = 40\text{ mA}$, $C_I = 0.33\text{ }\mu\text{F}$, $C_O = 0.1\text{ }\mu\text{F}$, $-40^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAB), $0^\circ\text{C} < T_J < +125^\circ\text{C}$ (for MC79LXXAC), unless otherwise noted).

| Characteristics | Symbol | MC79L24AC | | | Unit |
|---|----------------------------|---------------------|-------------|---------------------|---------------|
| | | Min | Typ | Max | |
| Output Voltage ($T_J = +25^\circ\text{C}$) | V_O | -23 | -24 | -25 | Vdc |
| Input Regulation ($T_J = +25^\circ\text{C}$) -27 Vdc $\geq V_I \geq -38\text{ Vdc}$ -27.5 Vdc $\geq V_I \geq -38\text{ Vdc}$ -28 Vdc $\geq V_I \geq -38\text{ Vdc}$ | Reg_{line} | - | - | 350 - 300 | mV |
| Load Regulation $T_J = +25^\circ\text{C}$, $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | Reg_{load} | - | - | 200 100 | mV |
| Output Voltage -27 Vdc $\geq V_I \geq -38\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ -28 Vdc $\geq V_I \geq -38\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ $V_I = -33\text{ Vdc}$, $1.0\text{ mA} \leq I_O \leq 70\text{ mA}$ | V_O | -22.8 - -22.8 | - - - | -25.2 - -25.2 | Vdc |
| Input Bias Current ($T_J = +25^\circ\text{C}$) ($T_J = +125^\circ\text{C}$) | I_{IB} | - - | - - | 6.5 6.0 | mA |
| Input Bias Current Change -28 Vdc $\geq V_I \geq -38\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$ | ΔI_{IB} | - - | - - | 1.5 0.1 | mA |
| Output Noise Voltage ($T_A = +25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$) | V_n | - | 200 | - | μV |
| Ripple Rejection ($-29 \leq V_I \leq -35\text{ Vdc}$, $f = 120\text{ Hz}$, $T_J = +25^\circ\text{C}$) | RR | 31 | 47 | - | dB |
| Dropout Voltage $I_O = 40\text{ mA}$, $T_J = +25^\circ\text{C}$ | $ V_I - V_O $ | - | 1.7 | - | Vdc |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

MC79L00A Series

APPLICATIONS INFORMATION

Design Considerations

The MC79L00A Series of fixed voltage regulators are designed with Thermal Overload Protections that shuts down the circuit when subjected to an excessive power overload condition, Internal Short Circuit Protection that limits the maximum current the circuit will pass.

In many low current applications, compensation capacitors are not required. However, it is recommended that the regulator input be bypassed with a capacitor if the regulator is connected to the power supply filter with long wire length, or if the output load capacitance is large. An input bypass capacitor should be selected to provide good

high-frequency characteristics to insure stable operation under all load conditions. A 0.33 μF or larger tantalum, mylar, or other capacitor having low internal impedance at high frequencies should be chosen. The bypass capacitor should be mounted with the shortest possible leads directly across the regulator's input terminals. Normally good construction techniques should be used to minimize ground loops and lead resistance drops since the regulator has no external sense lead. Bypassing the output is also recommended.



Figure 2. Positive and Negative Regulator



A common ground is required between the input and the output voltages. The input voltage must remain typically 2.0 V above the output voltage even during the low point on the ripple voltage.

* C_I is required if regulator is located an appreciable distance from the power supply filter

** C_O improves stability and transient response.

Figure 3. Standard Application

MC79L00A Series

TYPICAL CHARACTERISTICS

($T_A = +25^\circ\text{C}$, unless otherwise noted.)

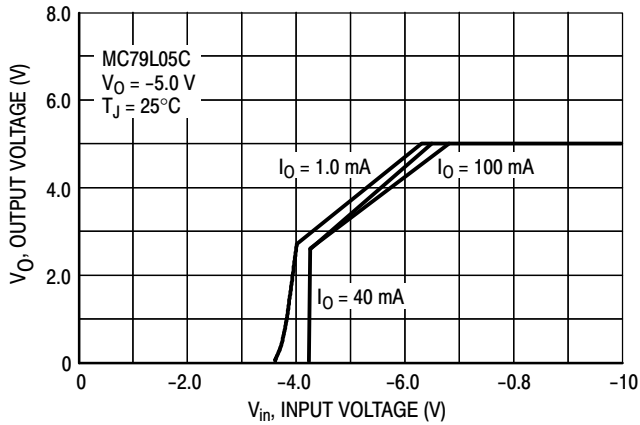


Figure 4. Dropout Characteristics

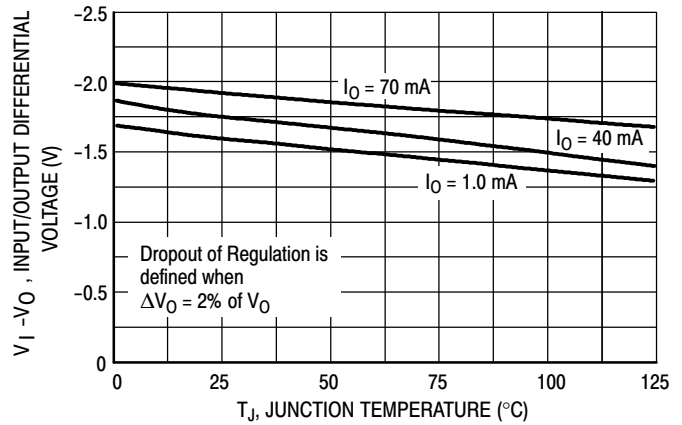


Figure 5. Dropout Voltage versus Junction Temperature



Figure 6. Input Bias Current versus Ambient Temperature

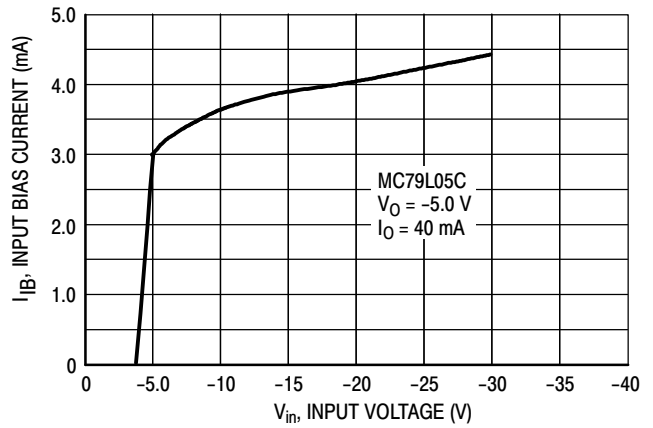


Figure 7. Input Bias Current versus Input Voltage



Figure 8. Maximum Average Power Dissipation versus Ambient Temperature (TO-92)



Figure 9. SOP-8 Thermal Resistance and Maximum Power Dissipation versus P.C.B. Copper Length

MC79L00A Series

ORDERING INFORMATION

| Device | Nominal Voltage | Operating Temperature Range | Package | Shipping† |
|---------------|-----------------|-----------------------------|------------------|------------------------|
| MC79L05ABDG | -5.0 V | TJ = -40° to +125°C | SOIC-8 (Pb-Free) | 98 Units / Rail |
| MC79L05ABDR2G | | | SOIC-8 (Pb-Free) | 2500 / Tape & Reel |
| MC79L05ABPG | | | TO-92 (Pb-Free) | 2000 Units / Bag |
| MC79L05ABPRAG | | | TO-92 (Pb-Free) | 2000 / Tape & Reel |
| MC79L05ACDG | | TJ = 0° to +125°C | SOIC-8 (Pb-Free) | 98 Units / Rail |
| MC79L05ACDR2G | | | SOIC-8 (Pb-Free) | 2500 / Tape & Reel |
| MC79L05ACPG | | | TO-92 (Pb-Free) | 2000 Units / Bag |
| MC79L05ACPRAG | | | TO-92 (Pb-Free) | 2000 / Tape & Reel |
| MC79L05ACPRMG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box |
| MC79L05ACPRPG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box |
| MC79L12ABDG | -12 V | TJ = -40° to +125°C | SOIC-8 (Pb-Free) | 98 Units / Rail |
| MC79L12ABDR2G | | | SOIC-8 (Pb-Free) | 2500 / Tape & Reel |
| MC79L12ABPG | | | TO-92 (Pb-Free) | 2000 Units / Bag |
| MC79L12ABPRAG | | | TO-92 (Pb-Free) | 2000 / Tape & Reel |
| MC79L12ACDG | -12 V | TJ = 0° to +125°C | SOIC-8 (Pb-Free) | 98 Units / Rail |
| MC79L12ACDR2G | | | SOIC-8 (Pb-Free) | 2500 / Tape & Reel |
| MC79L12ACPG | | | TO-92 (Pb-Free) | 2000 Units / Bag |
| MC79L12ACPRAG | | | TO-92 (Pb-Free) | 2000 / Tape & Reel |
| MC79L12ACPRPG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box |

MC79L00A Series

ORDERING INFORMATION (continued)

| Device | Nominal Voltage | Operating Temperature Range | Package | Shipping† | | |
|---------------|-----------------|-----------------------------|------------------|------------------------|-----------------|------------------------|
| MC79L15ABDG | -15 V | TJ = -40° to +125°C | SOIC-8 (Pb-Free) | 98 Units / Rail | | |
| MC79L15ABDR2G | | | SOIC-8 (Pb-Free) | 2500 / Tape & Reel | | |
| MC79L15ABPG | | | TO-92 (Pb-Free) | 2000 Units / Bag | | |
| MC79L15ABPRPG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box | | |
| MC79L15ACDG | -15 V | TJ = 0° to +125°C | SOIC-8 (Pb-Free) | 98 Units / Rail | | |
| MC79L15ACDR2G | | | SOIC-8 (Pb-Free) | 2500 / Tape & Reel | | |
| MC79L15ACPG | | | TO-92 (Pb-Free) | 2000 Units / Bag | | |
| MC79L15ACPRAG | | | TO-92 (Pb-Free) | 2000 / Tape & Reel | | |
| MC79L15ACPREG | | | TO-92 (Pb-Free) | 2000 / Tape & Reel | | |
| MC79L15ACPRPG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box | | |
| MC79L18ABPRPG | | | -18 V | TJ = -40° to +125°C | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box |
| MC79L18ACPG | | | | TJ = 0° to +125°C | TO-92 (Pb-Free) | 2000 Units / Bag |
| MC79L24ABPG | -24 V | TJ = -40° to +125°C | TO-92 (Pb-Free) | 2000 Units / Bag | | |
| MC79L24ACPG | | TJ = 0° to +125°C | TO-92 (Pb-Free) | 2000 Units / Bag | | |
| MC79L24ACPRMG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box | | |
| MC79L24ACPRPG | | | TO-92 (Pb-Free) | 2000 / Tape & Ammo Box | | |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

MC79L00A Series

PACKAGE DIMENSIONS

SOIC-8 NB
CASE 751-07
ISSUE AK



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSION A AND B DO NOT INCLUDE MOLD PROTRUSION.
4. MAXIMUM MOLD PROTRUSION 0.15 (0.006) PER SIDE.
5. DIMENSION D DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.127 (0.005) TOTAL IN EXCESS OF THE D DIMENSION AT MAXIMUM MATERIAL CONDITION.
6. 751-01 THRU 751-06 ARE OBSOLETE. NEW STANDARD IS 751-07.

| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|------|-----------|-------|
| | MIN | MAX | MIN | MAX |
| A | 4.80 | 5.00 | 0.189 | 0.197 |
| B | 3.80 | 4.00 | 0.150 | 0.157 |
| C | 1.35 | 1.75 | 0.053 | 0.069 |
| D | 0.33 | 0.51 | 0.013 | 0.020 |
| G | 1.27 BSC | | 0.050 BSC | |
| H | 0.10 | 0.25 | 0.004 | 0.010 |
| J | 0.19 | 0.25 | 0.007 | 0.010 |
| K | 0.40 | 1.27 | 0.016 | 0.050 |
| M | 0° | 8° | 0° | 8° |
| N | 0.25 | 0.50 | 0.010 | 0.020 |
| S | 5.80 | 6.20 | 0.228 | 0.244 |

SOLDERING FOOTPRINT*



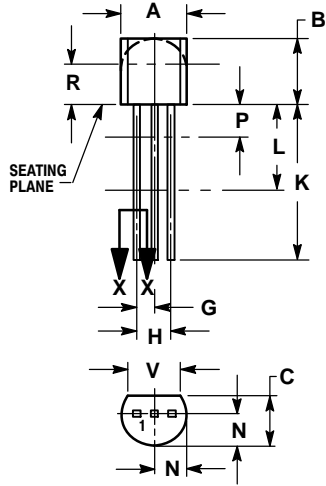
SCALE 6:1 ($\frac{\text{mm}}{\text{inches}}$)

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

MC79L00A Series

PACKAGE DIMENSIONS

TO-92 (TO-226)
CASE 29-11
ISSUE AM



STRAIGHT LEAD
BULK PACK



SECTION X-X

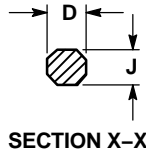
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

| DIM | INCHES | | MILLIMETERS | |
|-----|--------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.175 | 0.205 | 4.45 | 5.20 |
| B | 0.170 | 0.210 | 4.32 | 5.33 |
| C | 0.125 | 0.165 | 3.18 | 4.19 |
| D | 0.016 | 0.021 | 0.407 | 0.533 |
| G | 0.045 | 0.055 | 1.15 | 1.39 |
| H | 0.095 | 0.105 | 2.42 | 2.66 |
| J | 0.015 | 0.020 | 0.39 | 0.50 |
| K | 0.500 | --- | 12.70 | --- |
| L | 0.250 | --- | 6.35 | --- |
| N | 0.080 | 0.105 | 2.04 | 2.66 |
| P | --- | 0.100 | --- | 2.54 |
| R | 0.115 | --- | 2.93 | --- |
| V | 0.135 | --- | 3.43 | --- |



BENT LEAD
TAPE & REEL
AMMO PACK



SECTION X-X

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED.
4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

| DIM | MILLIMETERS | |
|-----|-------------|------|
| | MIN | MAX |
| A | 4.45 | 5.20 |
| B | 4.32 | 5.33 |
| C | 3.18 | 4.19 |
| D | 0.40 | 0.54 |
| G | 2.40 | 2.80 |
| J | 0.39 | 0.50 |
| K | 12.70 | --- |
| N | 2.04 | 2.66 |
| P | 1.50 | 4.00 |
| R | 2.93 | --- |
| V | 3.43 | --- |

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