

# MC79L00A Series

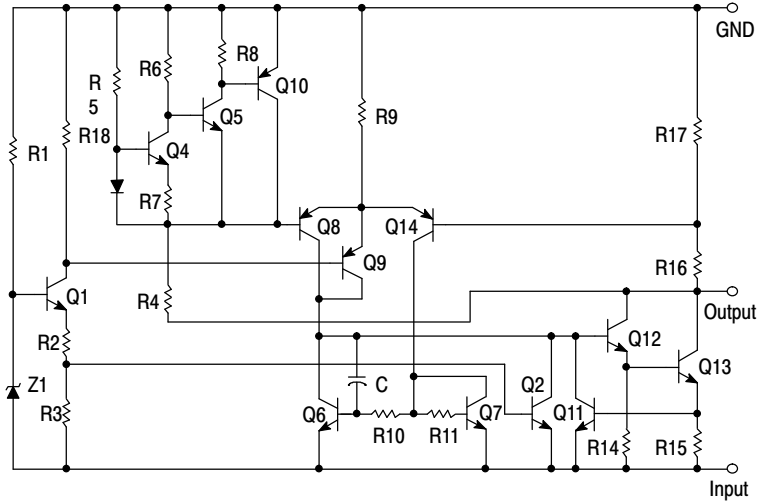
## 100 mA Negative Voltage Regulators

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

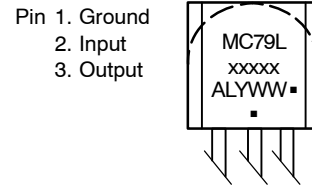
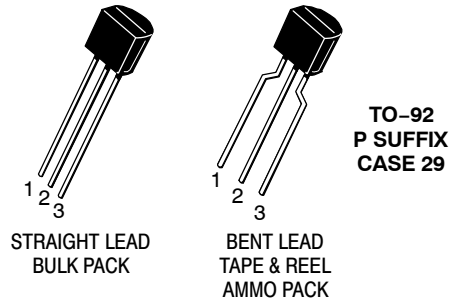
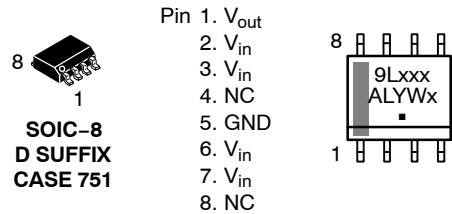


ON Semiconductor®

<http://onsemi.com>

### THREE-TERMINAL LOW CURRENT NEGATIVE FIXED VOLTAGE REGULATORS

#### MARKING DIAGRAMS



xxx = Specific Device Code  
 A = Assembly Location  
 L = Wafer Lot  
 Y = Year  
 W, WW = 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  Case 751 (SOIC-8 Type) (Note 1) $T_A = 25^\circ\text{C}$ Thermal Resistance, Junction-to-Ambient Thermal Resistance, Junction-to-Case	PD $R_{\theta JA}$ $R_{\theta JC}$  PD $R_{\theta JA}$ $R_{\theta JC}$	Internally Limited 160 83  Internally Limited 180 45	W $^\circ\text{C/W}$ $^\circ\text{C/W}$  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 Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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 $\geq V_I \geq -20\text{ Vdc}$	$\text{Reg}_{line}$	-	-	150 100	mV
Load Regulation $T_J = +25^\circ\text{C}$ , $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\text{Reg}_{load}$	-	-	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	-	$\mu\text{V}$
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

## 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 $\geq V_I \geq -27\text{ Vdc}$	$\text{Reg}_{\text{line}}$	-	-	250 200	mV
Load Regulation $T_J = +25^\circ\text{C}$ , $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\text{Reg}_{\text{load}}$	-	-	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 ( $T_J = +25^\circ\text{C}$ ) ( $T_J = +125^\circ\text{C}$ )	$I_{\text{IB}}$	-	-	6.5 6.0	mA
Input Bias Current Change -16 Vdc $\geq V_I \geq -27\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$I_{\text{IB}}$	-	-	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	-	$\mu\text{V}$
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

**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 $\geq V_I \geq -30\text{ Vdc}$	$\text{Reg}_{\text{line}}$	-	-	300 250	mV
Load Regulation $T_J = +25^\circ\text{C}$ , $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\text{Reg}_{\text{load}}$	-	-	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 ( $T_J = +25^\circ\text{C}$ ) ( $T_J = +125^\circ\text{C}$ )	$I_{\text{IB}}$	-	-	6.5 6.0	mA
Input Bias Current Change -20 Vdc $\geq V_I \geq -30\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\Delta I_{\text{IB}}$	-	-	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	-	$\mu\text{V}$
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

## 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 $\geq V_I \geq -33\text{ Vdc}$	$\text{Reg}_{\text{line}}$	-	-	325 - - 275	mV
Load Regulation $T_J = +25^\circ\text{C}$ , $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\text{Reg}_{\text{load}}$	-	-	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 ( $T_J = +25^\circ\text{C}$ ) ( $T_J = +125^\circ\text{C}$ )	$I_{\text{IB}}$	- -	- -	6.5 6.0	mA
Input Bias Current Change -21 Vdc $\geq V_I \geq -33\text{ Vdc}$ -27 Vdc $\geq V_I \geq -33\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$I_{\text{IB}}$	- - -	- - -	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	-	$\mu\text{V}$
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

**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 $\geq V_I \geq -38\text{ Vdc}$	$\text{Reg}_{\text{line}}$	-	-	350 - 300	mV
Load Regulation $T_J = +25^\circ\text{C}$ , $1.0\text{ mA} \leq I_O \leq 100\text{ mA}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\text{Reg}_{\text{load}}$	-	-	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 ( $T_J = +25^\circ\text{C}$ ) ( $T_J = +125^\circ\text{C}$ )	$I_{\text{IB}}$	- -	- -	6.5 6.0	mA
Input Bias Current Change -28 Vdc $\geq V_I \geq -38\text{ Vdc}$ $1.0\text{ mA} \leq I_O \leq 40\text{ mA}$	$\Delta I_{\text{IB}}$	- -	- -	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	-	$\mu\text{V}$
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

# 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  $\mu\text{F}$  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.

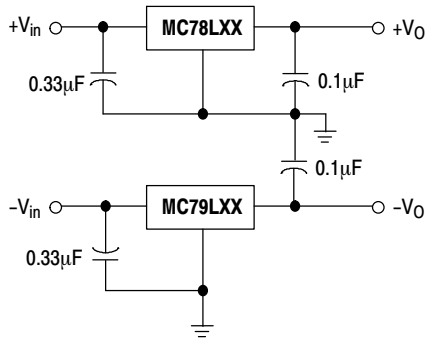
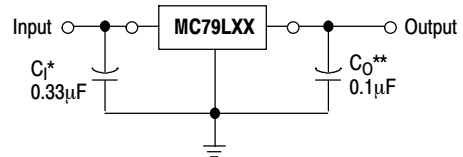


Figure 2. Positive and Negative Regulator



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.)

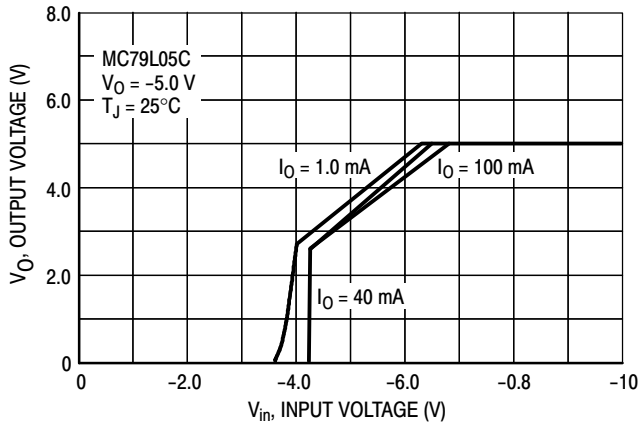


Figure 4. Dropout Characteristics

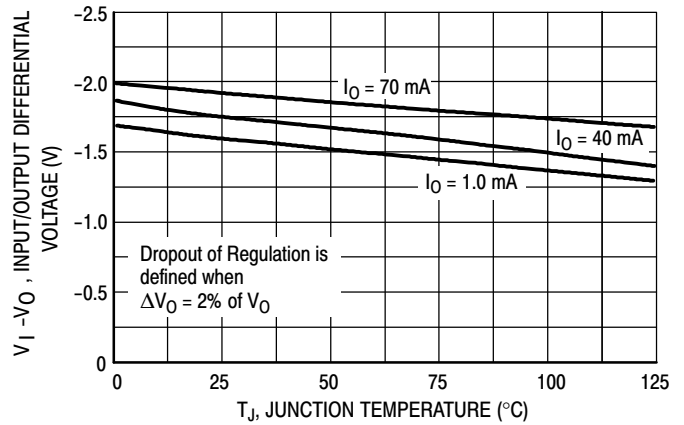


Figure 5. Dropout Voltage versus Junction Temperature

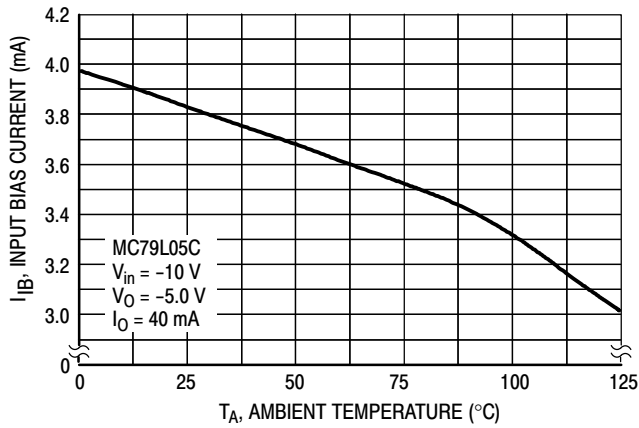


Figure 6. Input Bias Current versus Ambient Temperature

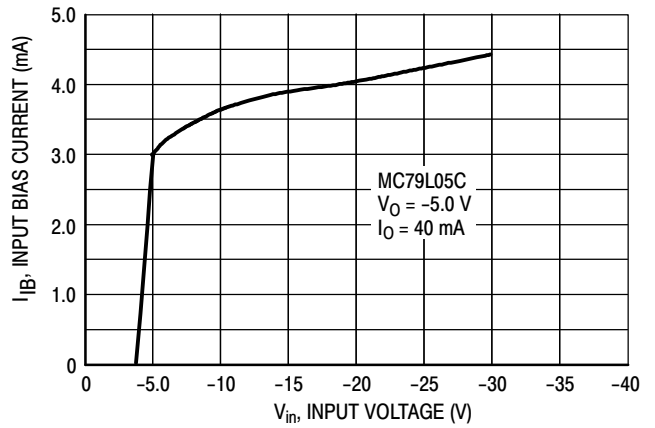


Figure 7. Input Bias Current versus Input Voltage

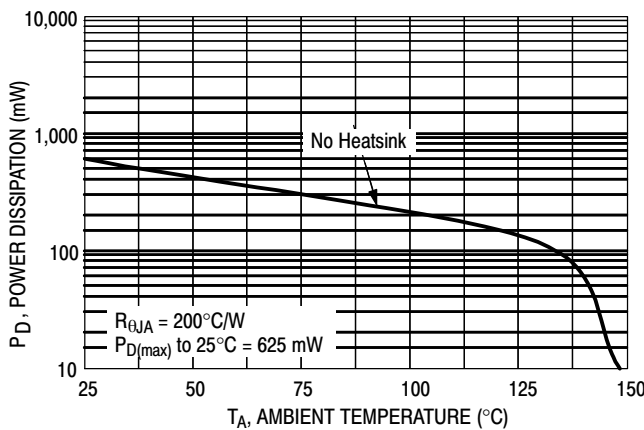


Figure 8. Maximum Average Power Dissipation versus Ambient Temperature (TO-92)

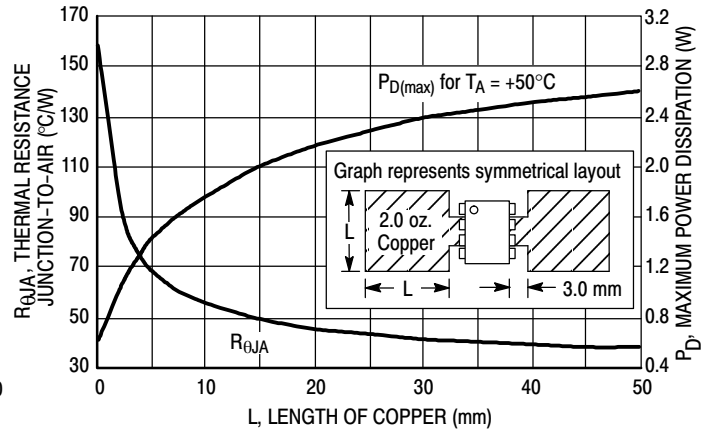


Figure 9. SOP-8 Thermal Resistance and Maximum Power Dissipation versus P.C.B. Copper Length

## MC79L00A Series

### ORDERING INFORMATION

Device	Nominal Voltage	Operating Temperature Range	Package	Shipping†	
MC79L05ABD	-5.0 V	TJ = -40° to +125°C	SOIC-8	98 Units / Rail	
MC79L05ABDG			SOIC-8 (Pb-Free)	98 Units / Rail	
MC79L05ABDR2			SOIC-8	2500 / Tape & Reel	
MC79L05ABDR2G			SOIC-8 (Pb-Free)	2500 / Tape & Reel	
MC79L05ABP			TO-92	2000 Units / Bag	
MC79L05ABPG			TO-92 (Pb-Free)	2000 Units / Bag	
MC79L05ABPRA			TO-92	2000 / Tape & Reel	
MC79L05ABPRAG			TO-92 (Pb-Free)	2000 / Tape & Reel	
MC79L05ACD			TJ = 0° to +125°C	SOIC-8	98 Units / Rail
MC79L05ACDG				SOIC-8 (Pb-Free)	98 Units / Rail
MC79L05ACDR2				SOIC-8	2500 / Tape & Reel
MC79L05ACDR2G				SOIC-8 (Pb-Free)	2500 / Tape & Reel
MC79L05ACP				TO-92	2000 Units / Bag
MC79L05ACPG				TO-92 (Pb-Free)	2000 Units / Bag
MC79L05ACPRA	TO-92	2000 / Tape & Reel			
MC79L05ACPRAG	TO-92 (Pb-Free)	2000 / Tape & Reel			
MC79L05ACPRM	TO-92	2000 / Tape & Ammo Box			
MC79L05ACPRMG	TO-92 (Pb-Free)	2000 / Tape & Ammo Box			
MC79L05ACPRP	TO-92	2000 / Tape & Ammo Box			
MC79L05ACPRPG	TO-92 (Pb-Free)	2000 / Tape & Ammo Box			
MC79L12ABD	-12 V	TJ = -40° to +125°C		SOIC-8	98 Units / Rail
MC79L12ABDG				SOIC-8 (Pb-Free)	98 Units / Rail
MC79L12ABDR2			SOIC-8	2500 / Tape & Reel	
MC79L12ABDR2G			SOIC-8 (Pb-Free)	2500 / Tape & Reel	
MC79L12ABP			TO-92	2000 Units / Bag	
MC79L12ABPG			TO-92 (Pb-Free)	2000 Units / Bag	
MC79L12ABPRA			TO-92	2000 / Tape & Reel	
MC79L12ABPRAG			TO-92 (Pb-Free)	2000 / Tape & Reel	

†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

## ORDERING INFORMATION

Device	Nominal Voltage	Operating Temperature Range	Package	Shipping†	
MC79L12ACD	-12 V	TJ = 0° to +125°C	SOIC-8	98 Units / Rail	
MC79L12ACDG			SOIC-8 (Pb-Free)	98 Units / Rail	
MC79L12ACDR2			SOIC-8	2500 / Tape & Reel	
MC79L12ACDR2G			SOIC-8 (Pb-Free)	2500 / Tape & Reel	
MC79L12ACP			TO-92	2000 Units / Bag	
MC79L12ACPG			TO-92 (Pb-Free)	2000 Units / Bag	
MC79L12ACPRA			TO-92	2000 / Tape & Reel	
MC79L12ACPRAG			TO-92 (Pb-Free)	2000 / Tape & Reel	
MC79L12ACPRP			TO-92	2000 / Tape & Ammo Box	
MC79L12ACPRPG			TO-92 (Pb-Free)	2000 / Tape & Ammo Box	
MC79L15ABD	-15 V	TJ = -40° to +125°C	SOIC-8	98 Units / Rail	
MC79L15ABDG			SOIC-8 (Pb-Free)	98 Units / Rail	
MC79L15ABDR2			SOIC-8	2500 / Tape & Reel	
MC79L15ABDR2G			SOIC-8 (Pb-Free)	2500 / Tape & Reel	
MC79L15ABP			TO-92	2000 Units / Bag	
MC79L15ABPG			TO-92 (Pb-Free)	2000 Units / Bag	
MC79L15ABPRP			TO-92	2000 / Tape & Ammo Box	
MC79L15ABPRPG			TO-92 (Pb-Free)	2000 / Tape & Ammo Box	
MC79L15ACD			TJ = 0° to +125°C	SOIC-8	98 Units / Rail
MC79L15ACDG				SOIC-8 (Pb-Free)	98 Units / Rail
MC79L15ACDR2	SOIC-8	2500 / Tape & Reel			
MC79L15ACDR2G	SOIC-8 (Pb-Free)	2500 / Tape & Reel			
MC79L15ACP	TO-92	2000 Units / Bag			
MC79L15ACPG	TO-92 (Pb-Free)	2000 Units / Bag			
MC79L15ACPRA	TO-92	2000 / Tape & Reel			
MC79L15ACPRAG	TO-92 (Pb-Free)	2000 / Tape & Reel			
MC79L15ACPRE	TO-92	2000 / Tape & Reel			
MC79L15ACPREG	TO-92 (Pb-Free)	2000 / Tape & Reel			
MC79L15ACPRP	TO-92	2000 / Tape & Ammo Box			
MC79L15ACPRPG	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

### ORDERING INFORMATION

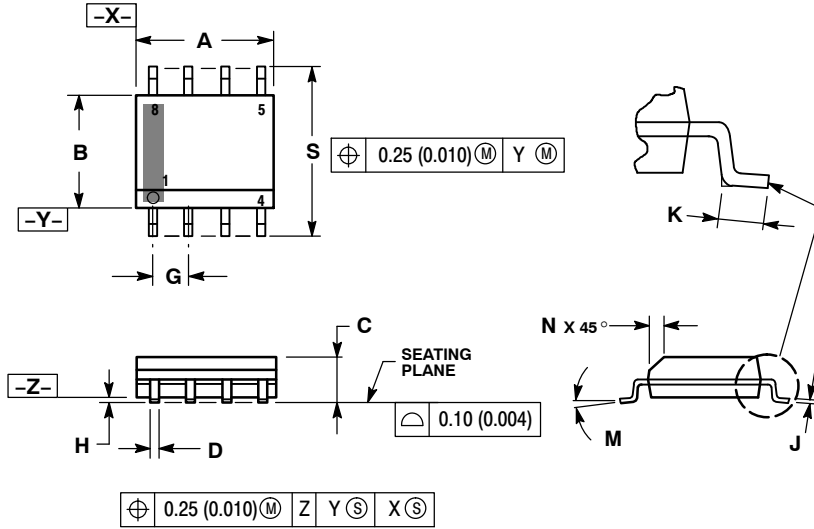
Device	Nominal Voltage	Operating Temperature Range	Package	Shipping†
MC79L18ABPRP	-18 V	TJ = -40° to +125°C	TO-92	2000 / Tape & Ammo Box
MC79L18ABPRPG			TO-92 (Pb-Free)	2000 / Tape & Ammo Box
MC79L18ACP		TJ = 0° to +125°C	TO-92	2000 Units / Bag
MC79L18ACPG			TO-92 (Pb-Free)	2000 Units / Bag
MC79L24ABP	-24 V	TJ = -40° to +125°C	TO-92	2000 Units / Bag
MC79L24ABPG			TO-92 (Pb-Free)	2000 Units / Bag
MC79L24ACP		TJ = 0° to +125°C	TO-92	2000 Units / Bag
MC79L24ACPG			TO-92 (Pb-Free)	2000 Units / Bag
MC79L24ACPRM			TO-92	2000 / Tape & Ammo Box
MC79L24ACPRMG			TO-92 (Pb-Free)	2000 / Tape & Ammo Box
MC79L24ACPRP			TO-92	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  
CASE 751-07  
ISSUE AJ

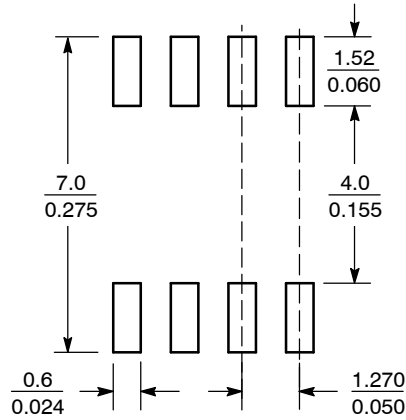


**NOTES:**

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	$0^\circ$	$8^\circ$	$0^\circ$	$8^\circ$
N	0.25	0.50	0.010	0.020
S	5.80	6.20	0.228	0.244

### SOLDERING FOOTPRINT\*



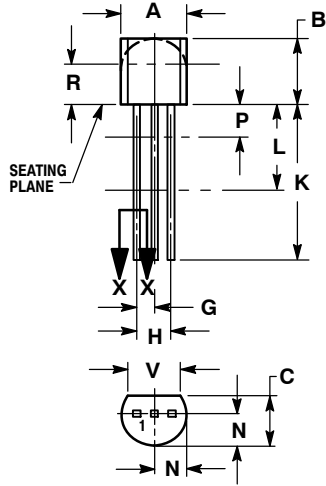
SCALE 6:1  $\left(\frac{\text{mm}}{\text{inches}}\right)$

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

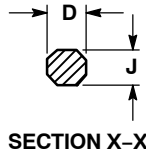
# MC79L00A Series

## PACKAGE DIMENSIONS

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



STRAIGHT LEAD  
BULK PACK

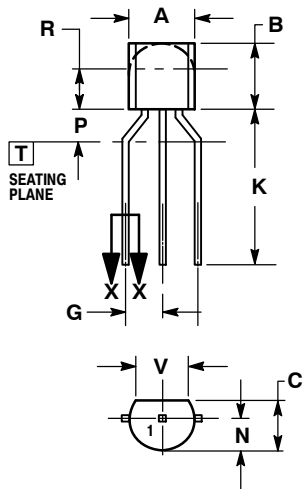


SECTION X-X

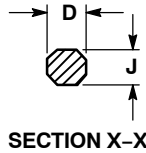
NOTES:

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	---

**ON Semiconductor** and **ON** are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

### PUBLICATION ORDERING INFORMATION

**LITERATURE FULFILLMENT:**  
Literature Distribution Center for ON Semiconductor  
P.O. Box 5163, Denver, Colorado 80217 USA  
**Phone:** 303-675-2175 or 800-344-3860 Toll Free USA/Canada  
**Fax:** 303-675-2176 or 800-344-3867 Toll Free USA/Canada  
**Email:** orderlit@onsemi.com

**N. American Technical Support:** 800-282-9855 Toll Free  
USA/Canada  
**Europe, Middle East and Africa Technical Support:**  
Phone: 421 33 790 2910  
**Japan Customer Focus Center**  
Phone: 81-3-5773-3850

**ON Semiconductor Website:** [www.onsemi.com](http://www.onsemi.com)  
**Order Literature:** <http://www.onsemi.com/orderlit>

For additional information, please contact your local Sales Representative