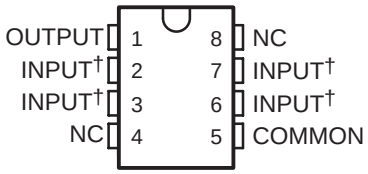
SLVS011D − OCTOBER 1982 − REVISED AUGUST 2003

- **3-Terminal Regulators**
- **Output Current Up To 100 mA**
- **No External Components Required**
- **Internal Thermal-Overload Protection**
- **Internal Short-Circuit Current Limiting**
- **Direct Replacement for Industry-Standard MC79L00 Series**
- **Available in 5% or 10% Selections**

D PACKAGE
(TOP VIEW)



† Internally connected
NC − No internal connection

LP PACKAGE
(TOP VIEW)

description/ordering information

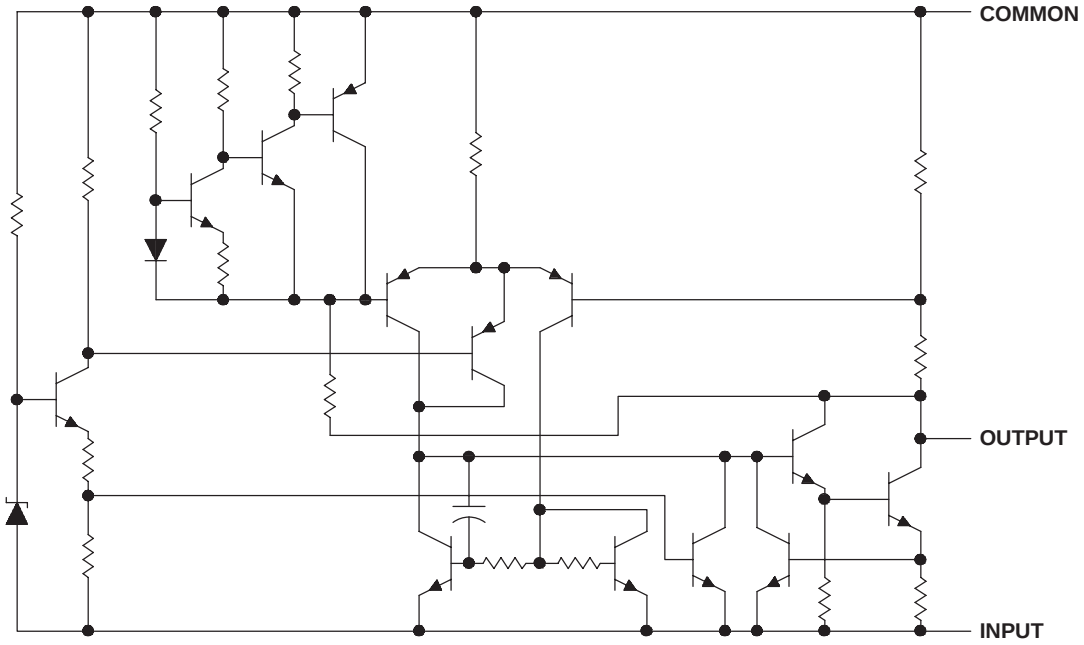
This series of fixed negative-voltage integrated-circuit voltage regulators is designed for a wide range of applications. These include on-card regulation for elimination of noise and distribution problems associated with single-point regulation. In addition, they can be used to control series pass elements to make high-current voltage-regulator circuits. One of these regulators can deliver up to 100 mA of output current. The internal current-limiting and thermal-shutdown features essentially make the regulators immune to overload. When used as a replacement for a Zener-diode and resistor combination, these devices can provide an effective improvement in output impedance of two orders of magnitude, with lower bias current.

ORDERING INFORMATION

T_J	OUTPUT VOLTAGE TOLERANCE	NOMINAL OUTPUT VOLTAGE (V)	PACKAGE†		ORDERABLE PART NUMBER	TOP-SIDE MARKING
0°C to 125°C	5%	−5	SOIC (D)	Tube of 75	MC79L05ACD	79L05A
				Reel of 2500	MC79L05ACDR	
			TO-226 / TO-92 (LP)	Bulk of 1000	MC79L05ACLP	79L05AC
				Reel of 2000	MC79L05ACLPR	
		−12	SOIC (D)	Tube of 75	MC79L12ACD	79L12A
				Reel of 2500	MC79L12ACDR	
			TO-226 / TO-92 (LP)	Bulk of 1000	MC79L12ACLP	79L12AC
				Reel of 2000	MC79L12ACLPR	
		−15	TO-226 / TO-92 (LP)	Bulk of 1000	MC79L15ACLP	79L15AC
				Ammo of 2000	MC79L15ACLPM	
				Reel of 2000	MC79L15ACLPR	
	10%	−12	TO-226 / TO-92 (LP)	Bulk of 1000	MC79L12CLP	79L12C
		−15	SOIC (D)	Tube of 75	MC79L15CD	79L15C

†

equivalent schematic



absolute maximum ratings over operating free-air temperature range (unless otherwise noted)†

Input voltage: MC79L05	−30 V
MC79L12, MC79L15	−35 V
Package thermal impedance, θ_{JA} (see Notes 1 and 2): D package	97°C/W
LP package	140°C/W
Operating free-air, case, or virtual junction temperature	150°C
Lead temperature 1.6 mm (1/16 inch) from case for 10 seconds	260°C
Storage temperature range, T_{stg}	−65°C to 150°C

† Stresses


NEGA
SLVS

istics at specified virtual junction temperature, I_O = 10 mA (unless otherwise

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish	MSL Peak Temp (3)	Op Temp (°C)	Top-Side Markings (4)	Samples
MC79L05ACD	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L05A	Samples
MC79L05ACDE4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L05A	Samples
MC79L05ACDG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L05A	Samples
MC79L05ACDR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L05A	Samples
MC79L05ACDRE4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L05A	Samples
MC79L05ACDRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L05A	Samples
MC79L05ACLP	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L05AC	Samples
MC79L05ACLPE3	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L05AC	Samples
MC79L05ACLPM	ACTIVE	TO-92	LP	3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L05AC	Samples
MC79L05ACLPME3	ACTIVE	TO-92	LP	3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L05AC	Samples
MC79L05ACLPR	ACTIVE	TO-92	LP	3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L05AC	Samples
MC79L05ACLPRE3	ACTIVE	TO-92	LP	3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L05AC	Samples
MC79L05AILP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	0 to 125		
MC79L05CD	OBSOLETE	SOIC	D	8		TBD	Call TI	Call TI	0 to 125		
MC79L05CDR	OBSOLETE	SOIC	D	8		TBD	Call TI	Call TI	0 to 125		
MC79L05CLP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	0 to 125		
MC79L12ACD	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L12A	Samples
MC79L12ACDE4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L12A	Samples
MC79L12ACDG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L12A	Samples

PACKAGE OPTION ADDENDUM

www.ti.com

24-Jan-2013

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish	MSL Peak Temp (3)	Op Temp (°C)	Top-Side Markings (4)	Samples
MC79L12ACDR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L12A	Samples
MC79L12ACDRE4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L12A	Samples
MC79L12ACDRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	0 to 125	79L12A	Samples
MC79L12ACLP	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L12AC	Samples
MC79L12ACLPE3	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L12AC	Samples
MC79L12ACLPR	ACTIVE	TO-92	LP	3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L12AC	Samples
MC79L12ACLPRE3	ACTIVE	TO-92	LP	3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L12AC	Samples
MC79L12CD	OBSOLETE	SOIC	D	8		TBD	Call TI	Call TI	0 to 125		
MC79L12CLP	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L12C	Samples
MC79L12CLPE3	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L12C	Samples
MC79L15ACD	OBSOLETE	SOIC	D	8		TBD	Call TI	Call TI	0 to 125		
MC79L15ACLP	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L15AC	Samples
MC79L15ACLPE3	ACTIVE	TO-92	LP	3	1000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L15AC	Samples
MC79L15ACLPR	ACTIVE	TO-92		3	2000	Pb-Free (RoHS)	CU SN	N / A for Pkg Type	0 to 125	79L15AC	Samples
MC79L15ACLPRE3	ACTIVE	TO-92	LP	3	2000	TO-92					

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details.
TBD: The Pb-Free/Green conversion plan has not been defined.
Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.
Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

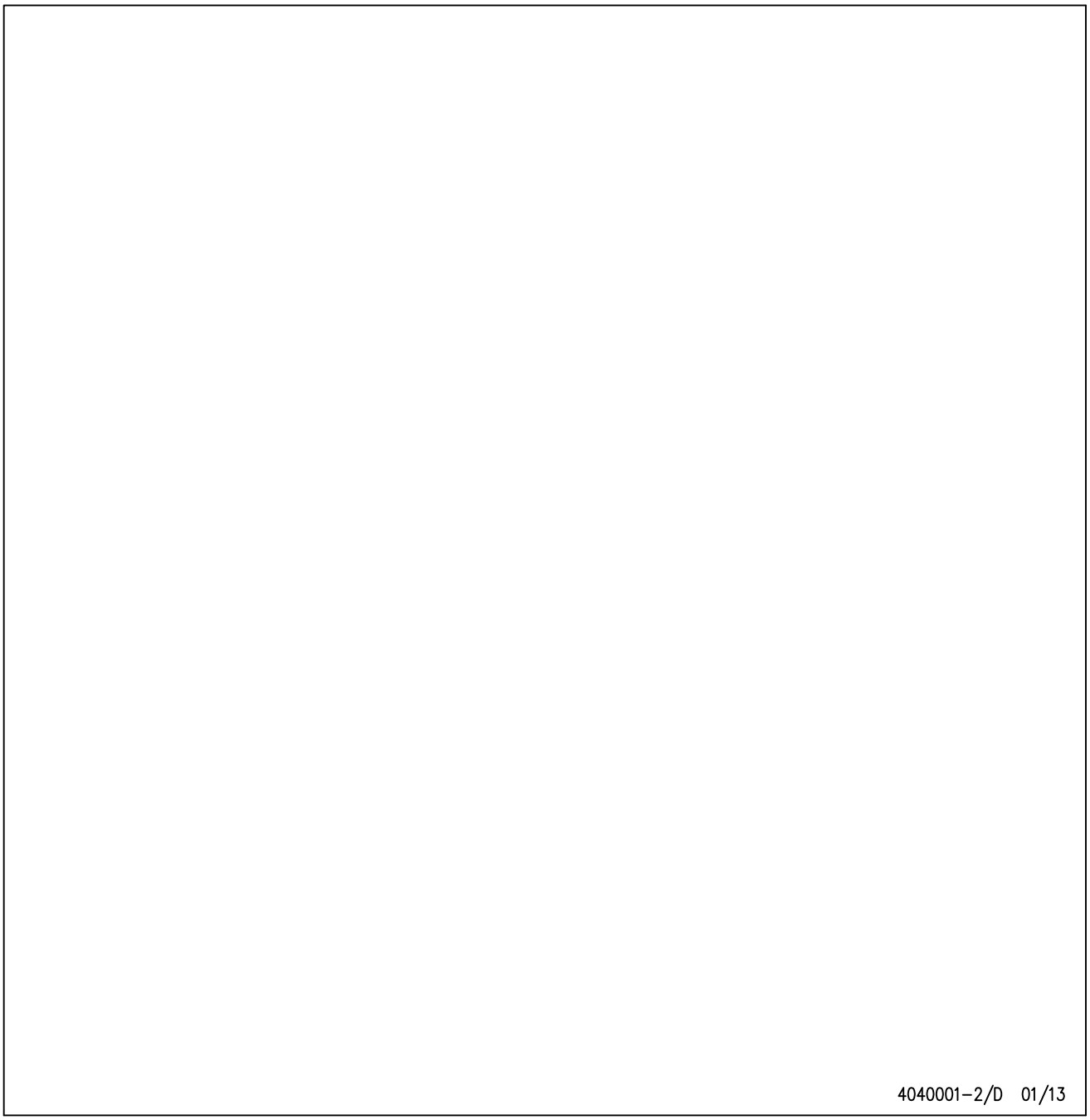
(3) MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) Only one of markings shown within the brackets will appear on the physical device.

Example
Pad Geometry
(See Note C)

Example
Solder Mask Opening
(See Note E)

D. Laser cutting apertures with trapezoidal walls and also rounding corners will offer bett
contact their board assembly site for stencil design recommendations. Refer to IPC–7525 for other stencil recommendations.

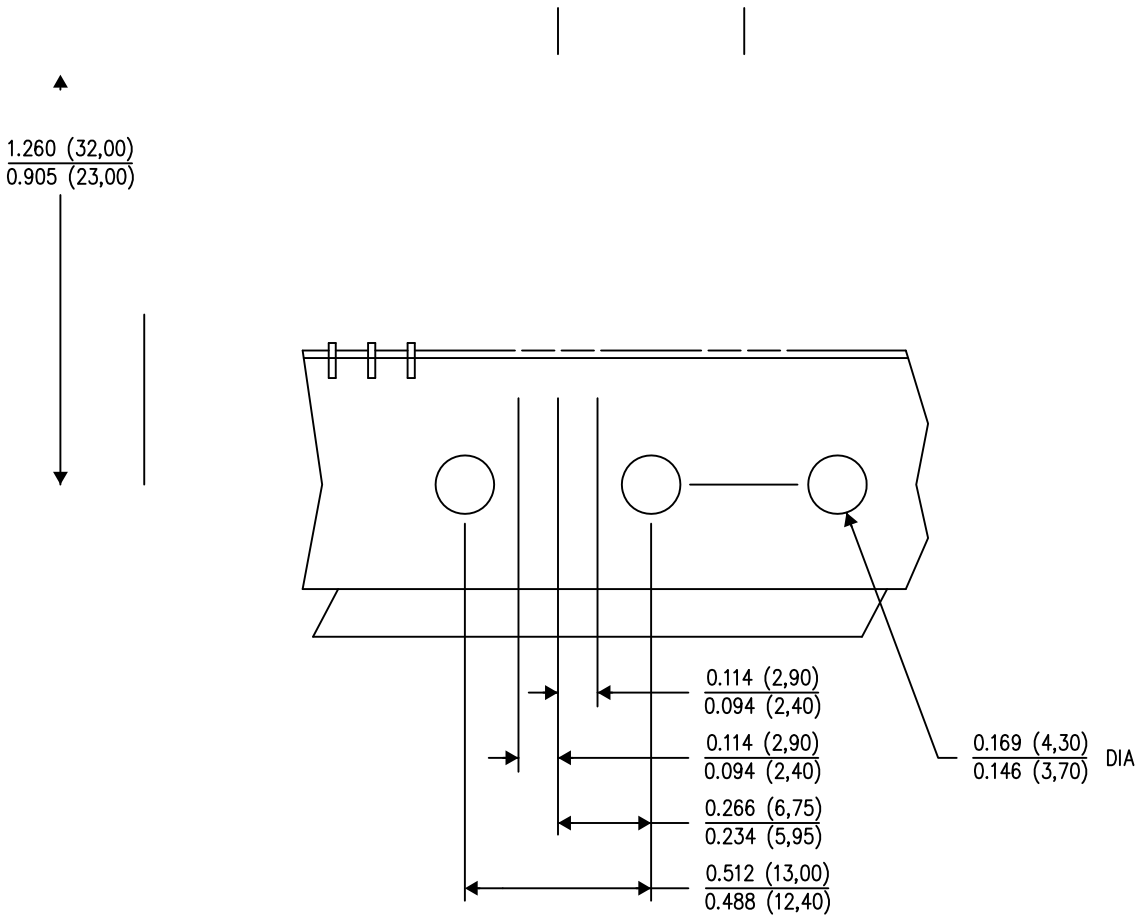


NOTES: A. All linear dimensions are in inches (millimeters).

C Lead dimensions are not controlled within this area.

D Falls within JEDEC TO–226 Variatio˙

LP (O–PBCY–W3) PLASTIC CYLINDRICAL PACKAGE



NC
A. All linear dimensions are in inches (millimeters).
B. This drawing is subject to change without notice.
C. Tape an

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