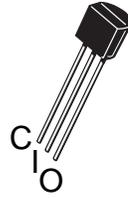


- 3-Terminal Regulators
- Output Current Up to 100 mA
- No External Components Required
- Internal Thermal-Overload Protection
- Internal Short-Circuit Current Limiting
- Direct Replacement for Motorola MC79L12 Series

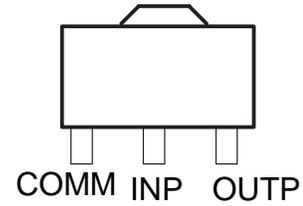


TO-92  
79L12A



### description

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 make them essentially immune to overload. When used as a replacement for a zener-diode and resistor combination, these devices can provide effective improvement in output impedance of two orders of magnitude, with lower bias



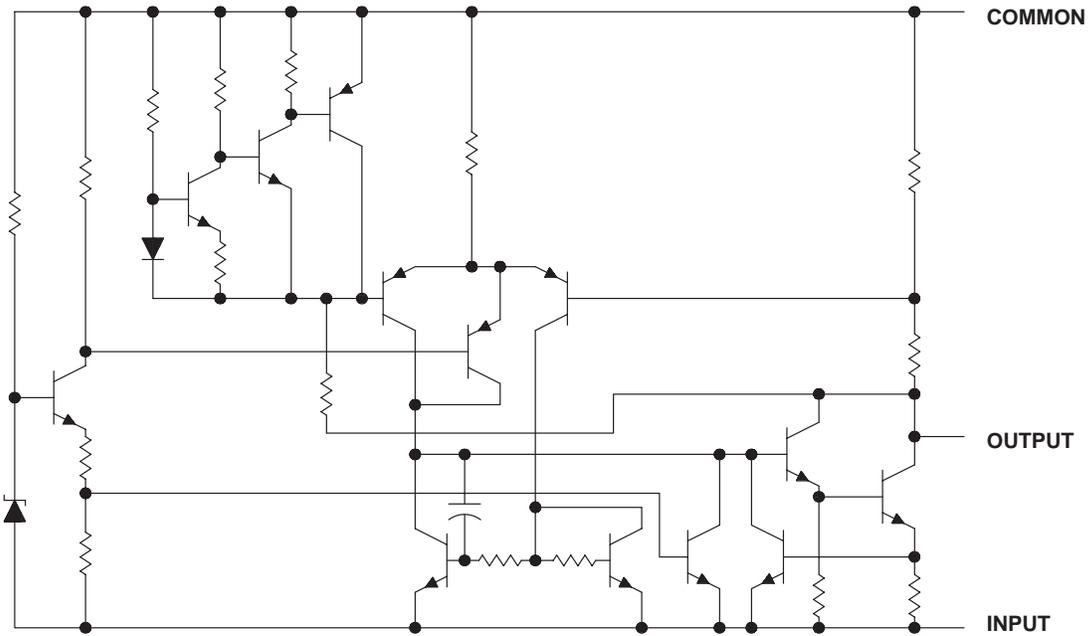
SOT-  
79L12C

**electrical characteristics at specified virtual junction temperature,  $V_I = -19V$ ,  $I_O = 40mA$  (unless otherwise noted)**

PARAMETER	TEST CONDITIONS	T ‡	79L12			UNIT
			MIN	TYP	MAX	
Output voltage	$I_O = 1mA \text{ to } 40mA, V = -14.5V$ $I_O = 1mA \text{ to } 70mA$	25°C	-11.5	-5	-12.5	V
		Full range	-11.4		-12.5	
		Full range	-11.4		-12.5	
Input voltage regulation	$V_I = -14.5 \text{ to } -27V$	25°C		50	250	mV
	$V_I = -16V \text{ to } -27V$			40	200	
Ripple rejection	$V_I = -15V \text{ to } -25V$ 120 Hz	25°C	37	42		dB
Output voltage regulation	$I_O = 1mA \text{ to } 100mA$	25°C		24	60	mV
	$I_O = 1mA \text{ to } 40mA$			15	30	
Output noise voltage	f = 10 Hz to 100 kHz	25°C		80		µV
Dropout voltage		25°C		1.7		V
Bias		25°C			6.5	mA
		125°C			6	
Bias current change	$V_I = -16V \text{ to } -27V$ $I_O = 1mA \text{ to } 40mA$	Full range			1.5	mA
					0.1	

‡ Pulse-testing techniques maintain  $T_J$  as close to  $T_A$  as possible. Thermal effects must be taken into account separately. All characteristics are measured with a 0.33-µF capacitor across the input and a 0.1-µF capacitor across the output. Full range for the 79L12 is  $-10°C$  to  $70°C$

**equivalent schematic**



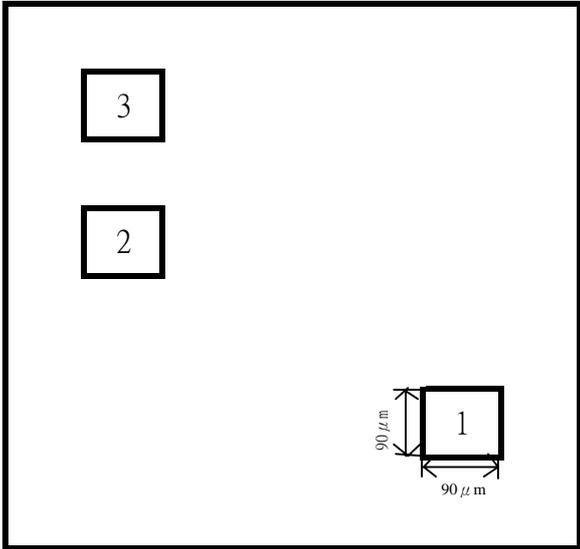
**absolute maximum ratings over operating free-air temperature range (unless otherwise noted)†**

- Input voltage: 79L12 ..... -35V
- 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

**recommended operating conditions**

79L12	MIN	MAX	UNIT
Input voltage, $V_I$	-14.5	-27	V
Output current, $I_O$		100	mA
Operating virtual junction temperature, $T_J$	0	70	°C

Pad Location WS79L00



chip size 1.15 x 1.35mm

**Pad Location Coordinates**

Pad N	Pad Name	X( μ m)	Y( μ m)
1	Ground	1150	115
2	Input	115	690
3	Output	115	950