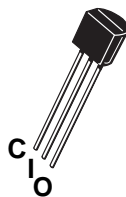


- 3-Terminal Regulators
- Output Current Up to 100 mA
- No External Components Required
- Internal Thermal-Overload Protection
- Internal Short-Circuit Current Limiting
- Direct Replacement for Motorola MC79L18 Series

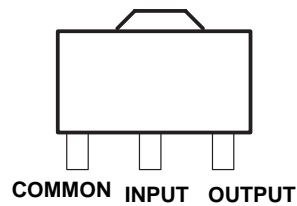


TO-92  
79L18ACZ



### 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 current.



SOT-89  
79L18CPK

COMMON INPUT OUTPUT

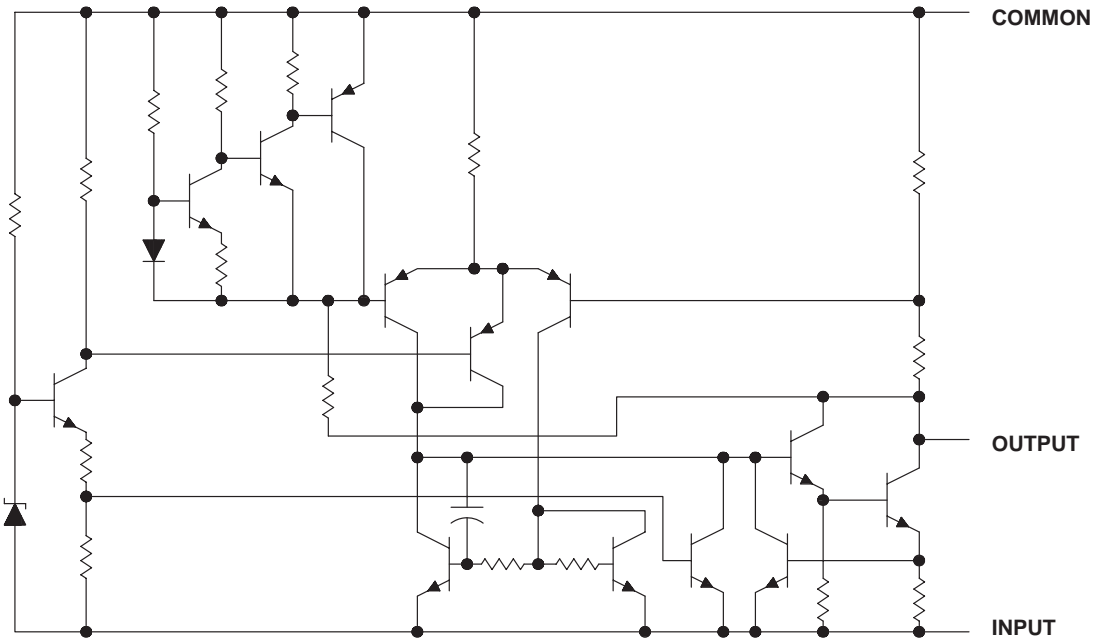
### electrical characteristics at specified virtual junction temperature, $V_I = -26V$ , $I_O = 40mA$ otherwise noted)

PARAMETER	TEST CONDITIONS	T ‡	79L18			UNIT
			MIN	TYP	MAX	
Output voltage	$I_O = 1mA$ to $40mA$ , $V_I = -20.5$ to $-33V$ $I_O = 1$ mA to $70$ mA	25°C	-17.3	-18	-18.7	V
		Full range	-17.1		-18.9	
		Full range	-17.1		-18.9	
Input voltage regulation	$V_I = -20.5$ to $-33V$ $V_I = -21V$ to $-33V$	25°C		70	325	mV
				60	275	
Ripple rejection	$V_I = -23V$ to $-33V$ $f = 120$ Hz	25°C	33	48		dB
Output voltage regulation	$I_O = 1$ mA to $100$ mA $I_O = 1$ mA to $40$ mA	25°C		27	170	mV
				19	85	
Output noise voltage	$f = 10$ Hz to $100$ kHz	25°C		150		µV
Dropout voltage		25°C		1.7		V
Bias current		25°C			6.5	mA
		125°C			6	
Bias current change	$V_I = -21V$ to $-33V$ $I_O = 1$ mA to $40$ mA	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  $0.33\text{-}\mu\text{F}$  capacitor across the input and a  $0.1\text{-}\mu\text{F}$  capacitor across the output. Full range for the 79L18 is  $T_J = 0^\circ\text{C}$  to  $70^\circ\text{C}$

# WS 79L18

## equivalent schematic



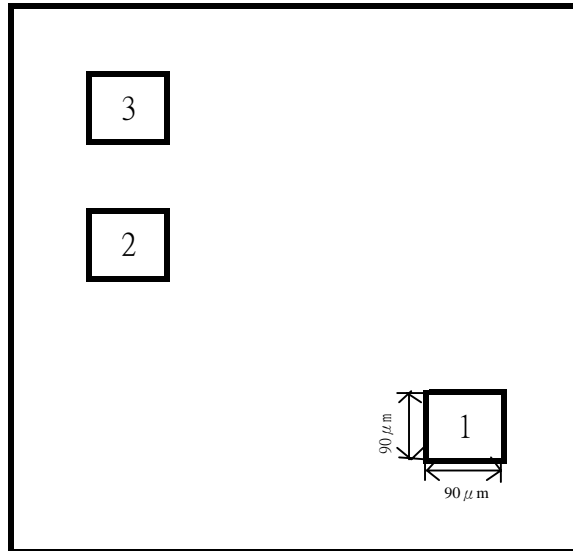
## absolute maximum ratings over operating free-air temperature range (unless otherwise noted)†

- Input voltage: 79L18 ..... -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

79L18	MIN	MAX	UNIT
Input voltage, $V_I$	-20.5	-33	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



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