

# **± 15V Dual-Tracking Voltage Regulator**

#### **GENERAL DESCRIPTION**

The XR-4195 is a dual-polarity tracking regulator designed to provide balanced positive and negative 15V output voltages at currents of up to 100mA.

The device is ideal for local "on-card" regulation, which eliminates the distribution problems associated with single-point regulation. Intended for ease of application, the XR-4195 requires only two external components for operation.

#### **FEATURES**

Direct Replacement for RM/RC 4195 ± 15V Operational Amplifier Power Thermal Shutdown at T<sub>j</sub> = +175°C Output Currents to 100mA As a Single Output Regulator, it may be used with up to +50V Output Available in 8-Pin Plastic Mini-DIP Low External Parts Count

#### **APPLICATIONS**

Operational Amplifier Supply On-Card Regulation Regulating High Voltage

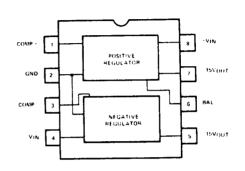
#### ABSOLUTE MAXIMUM RATINGS

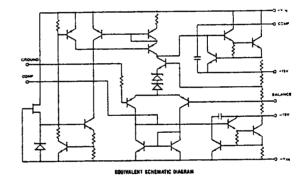
Input Voltage ±V to Ground	±30 V
Power Dissipation at T <sub>A</sub> = 25°C	600 mW
Load Current	100 mA
Operating Junction Temperature	
Range	0°C to +125°C
Storage Temperature Range	-65°C to +150°C

## ORDERING INFORMATION

Part Number	Package	Operating Temperature
XR-4195CP	Dip	0°C to +70°C

#### **FUNCTIONAL BLOCK DIAGRAM**





#### SYSTEM DESCRIPTION

The XR-4195 is a dual polarity tracking voltage regulator, internally trimmed to  $\pm$ 15V. Only output capacitors are required for operation. Internal protection circuits include thermal shutdown and active current limiting. The device may be configured as a single output high voltage regulator by adding a voltage divider between an output pin, the device ground (Pin 2) and system ground.

# XR-4195

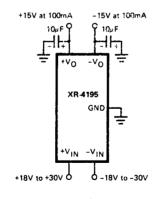
## **ELECTRICAL CHARACTERISTICS**

Test Conditions: (I<sub>L</sub> = 1mA, V<sub>CC</sub> =  $\pm$ 20V, C<sub>L</sub> = 10 $\mu$ F unless otherwise specified)

PARAMETERS	XR-4195CP				
	MIN	TYP	MAX	UNITS	CONDITIONS
Line Regulation		2	20	mV	$V_{IN} = \pm 18 \text{ to } \pm 30V$
Load Regulation		5	30	mV	I <sub>L</sub> = 1 to 100 mA
Output Voltage Temperature Stability		0.005	0.015	%/°C	
Standby Current Drain		±1.5	±3.0	mA	$V_{IN} = \pm 30V$ , $I_L = 0mA$
Input Voltage Range	18		30	V	
Output Voltage	14.5	15	15.5	٧	$T_i = +25$ °C
Output Voltage Tracking		±50	±300	mV	
Ripple Rejection		75		dB	f = 120 Hz, T <sub>i</sub> = +25°C
Input-Output Voltage Differential	3			٧	IL = 50mA
Short-Circuit Current		220		mA	$T_i = +25$ °C
Output Noise Voltage		60		μV RMS	$T_i = +25$ °C, f = 100 Hz to 100 kHz
Internal Thermal Shutdown		175		°C	

## THERMAL CHARACTERISTICS

PARAMETERS				
	MIN	TYP	MAX	CONDITIONS
Power Dissipation			0.6W	T <sub>A</sub> = 25°C T <sub>C</sub> = 25°C
Thermal Resistance		210°C/W		θJ-C θJ-A



10μF R1 R2

10μF R1 R2

10μF R1 R2

10μF R1 R2

15 KΩ 35 ΚΩ

2 V<sub>O</sub> = +15V (1 + R<sub>2</sub>)

10μF R1 R2

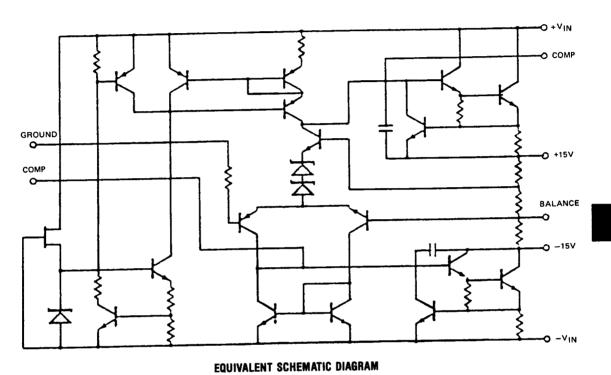
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**Balanced Output** 

**Positive Single Supply** 

TYPICAL APPLICATIONS

# XR-4195



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