

February 2, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:http://www.semtech.com

# DESCRIPTION

The SC1714 is a 3-terminal negative voltage regulator with an output voltage rated at 3.3V below the positive supply voltage. Designed to be an improved plug in replacement for the BA714, it offers a low typical supply current of  $12\mu$ A, a high output current sinking capability of 5mA, and a low negative temperature coefficient. It also features output overload protection. The SC1714 is ideal as a power source for liquid crystal displays.

## FEATURES

- Low power supply current.
- Low negative TC.
- High output sinking capability.
- Ouput overload protection.

#### **APPLICATIONS**

- Printing calculators
- Cameras
- Voltage reference for instrumentation

# TYPICAL APPLICATION CIRCUIT



## **ORDERING INFORMATION**

DEVICE <sup>(1)</sup>	PACKAGE			
SC1714ZS5	TO-92			

Note:

(1) Add suffix 'TR' for tape and reel.

## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Maximum	Units	
Supply Voltage	V <sub>cc</sub>	12.5	V	
Power Dissipation	P <sub>D</sub>	300	mW	
Operating Temperature Range	T <sub>A</sub>	-25 to 75	°C	
Storage Temperature Range	Τ <sub>stg</sub>	-55 to 125	°C	
Output Current	I <sub>OUT</sub>	50	mA	

## **PIN CONFIGURATION**





February 2, 1998

#### **ELECTRICAL CHARACTERISTICS**

Unless otherwise specified,  $T_A = 25^{\circ}C$ ,  $V_{CC} = 6.0V$ 

Parameter	Symbol	Conditions	Min	Тур	Max	Units
Output Voltage	V <sub>out</sub>	$V_{CC} = 4-12V,$ $I_{OUT} = 50-300\mu A$ $T_A = 0^{\circ}C-40^{\circ}C$	3.2		3.4	V
Supply Current	I <sub>cc</sub>	$R_L = \infty$		12	17	μA
Output Voltage to Supply Voltage Ratio	V <sub>OUT</sub> / V <sub>CC</sub>	R <sub>L</sub> =∞		1		mV/V
Output Short Circuit Current	I <sub>os</sub>			5	10	mA

#### **TEST CIRCUIT**



# **TYPICAL PERFORMANCE CHARACTERISTICS**





**3-TERMINAL REGULATOR (-3.3V)** 

February 2, 1998

#### **TYPICAL PERFORMANCE CHARACTERISTICS (cont.)**





#### **DEVICE OUTLINE - TO-92**

