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 12µA, 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.

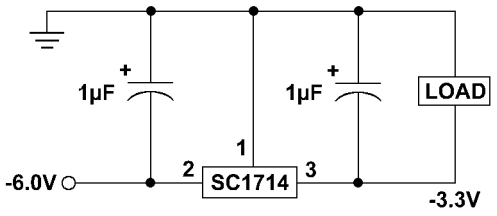
FEATURES

- 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

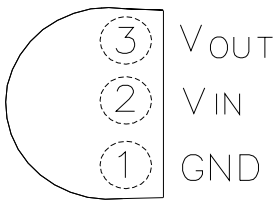
DEVICE(1)	PACKAGE
SC1714ZS5	TO-92

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

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Maximum	Units
Supply Voltage	V_{CC}	12.5	V
Power Dissipation	P_D	300	mW
Operating Temperature Range	T_A	-25 to 75	°C
Storage Temperature Range	T_{STG}	-55 to 125	°C
Output Current	I_{OUT}	50	mA

PIN CONFIGURATION



PIN DESCRIPTIONS

PIN 1: GND Ground

PIN 2: V_{IN} Input voltage

PIN 3: V_{OUT} Ouput Voltage

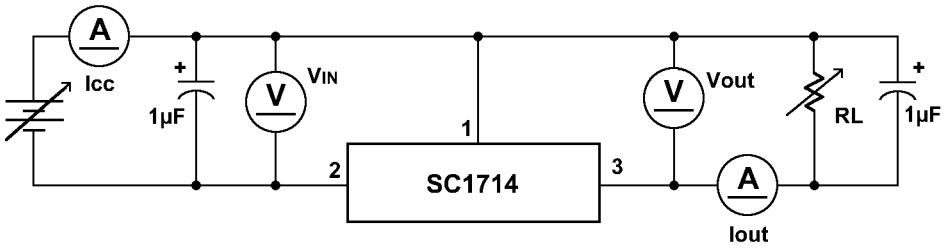
February 2, 1998

ELECTRICAL CHARACTERISTICS

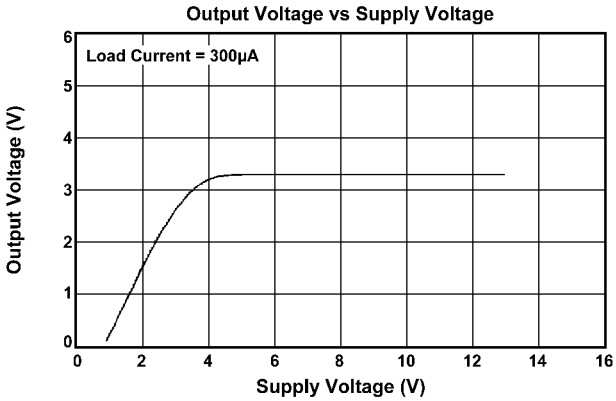
Unless otherwise specified, T_A = 25°C, V_{CC} = 6.0V

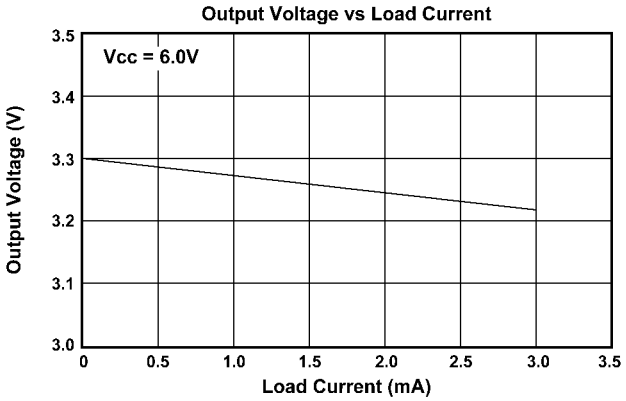
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Output Voltage	V_{OUT}	V_{CC} = 4-12V, I_{OUT} = 50-300µA T_A = 0°C-40°C	3.2		3.4	V
Supply Current	I_{CC}	$R_L = \infty$		12	17	µA
Output Voltage to Supply Voltage Ratio	V_{OUT} / V_{CC}	$R_L = \infty$		1		mV/V
Output Short Circuit Current	I_{OS}			5	10	mA

TEST CIRCUIT



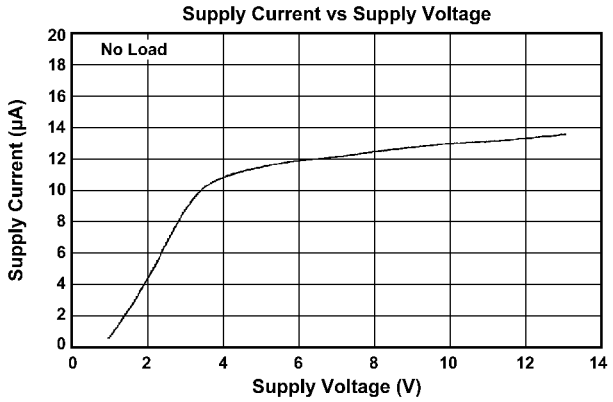
TYPICAL PERFORMANCE CHARACTERISTICS

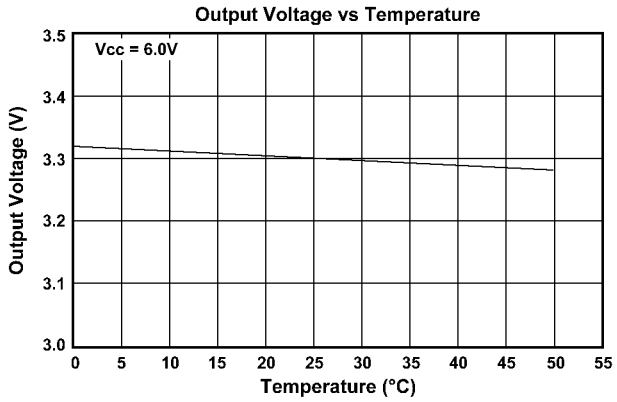


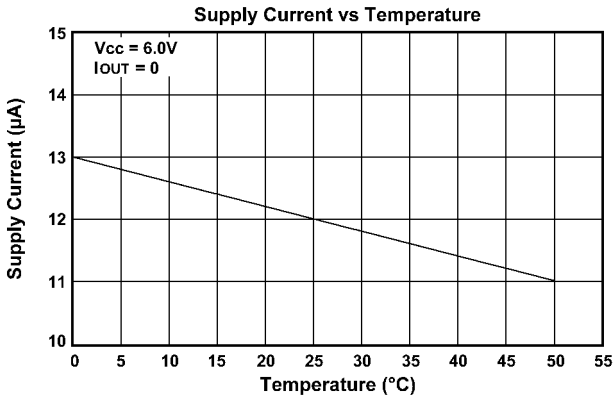


February 2, 1998

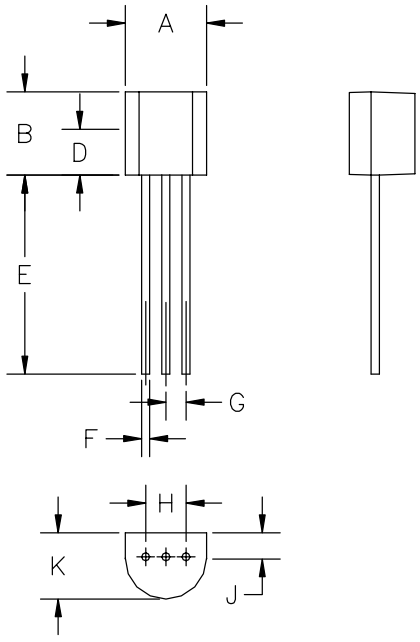
TYPICAL PERFORMANCE CHARACTERISTICS (cont.)







DEVICE OUTLINE - TO-92



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.205	4.445	5.207	—
B	.170	.210	4.318	5.334	—
E	.500	.610	12.7	15.5	—
F	.016	.022	.4064	.5588	—
G	.045	.055	1.143	1.397	—
H	.095	.105	2.413	2.667	—
J	.045	.060	1.143	1.524	—
K	.125	.165	3.175	4.191	—