



## DESCRIPTION

The SLC1600 is a highly advanced linear optocoupler device. The product takes advantage of highly matched transistors used for both a Servo Feedback Loop and a Forward Output Loop. The closely matched transistors provide a high degree of linearity across a wide range of input signal variation. These features make the SLC1600 an ideal product for transformer replacement in many medical, industrial and power supply isolation circuits. Its small size makes the SLC1600 quite attractive for telecom applications in which board space is limited.

## FEATURES

- Two Linear Optocouplers in compact 16 SOIC package
- Very high servo linearity across temperature
- Low input power consumption
- High stability
- High input-to-isolation package (1500Vrms)

## APPLICATIONS

- Power supply feedback
- Transformer replacement
- Audio signal interface
- Digital telephone isolation

## OPTIONS/SUFFIXES\*

- -TR Tape and Reel

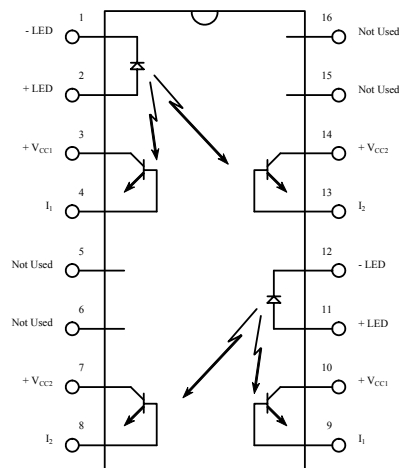
NOTE: Suffixes listed above are not included in marking on device for part number identification.

## ABSOLUTE MAXIMUM RATINGS\*

PARAMETER	UNIT	MIN	TYP	MAX
Storage Temperature	°C	-55		120
Operating Temperature	°C	-40		85
Continuous Input Current	mA			40
Transient Input Current	mA			400
Reverse Input Current Voltage	V	6		
Output Power Dissipation	mW			500

\*The values indicated are absolute stress ratings. Functional operation of the device is not implied at these or any conditions in excess of those defined in electrical characteristics section of this document. Exposure to Absolute Ratings may cause permanent damage to the device and may adversely affect reliability.

## SCHEMATIC DIAGRAM



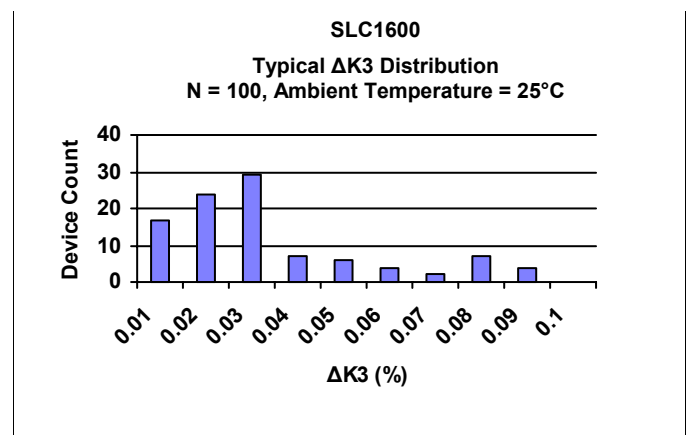
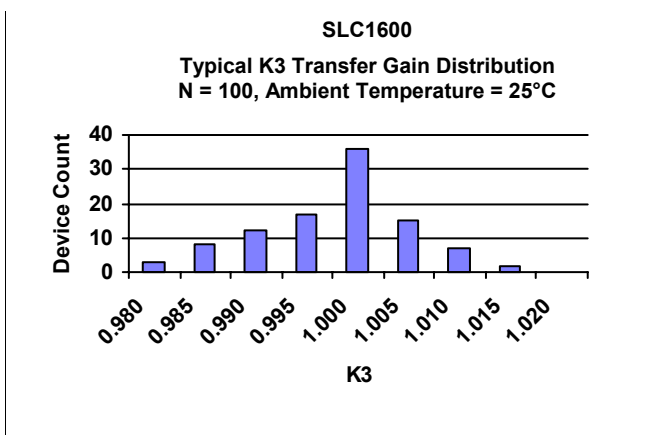
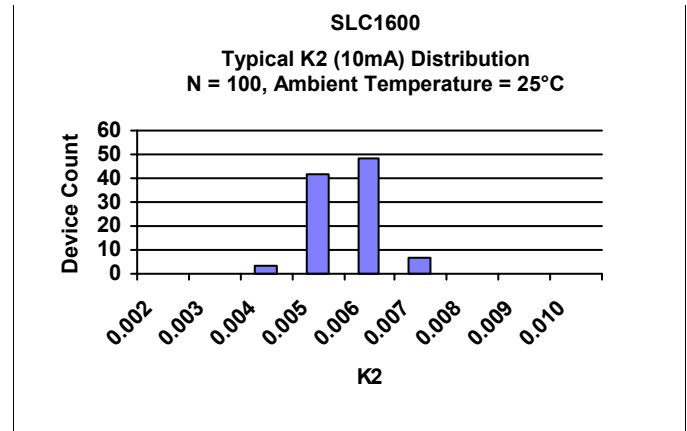
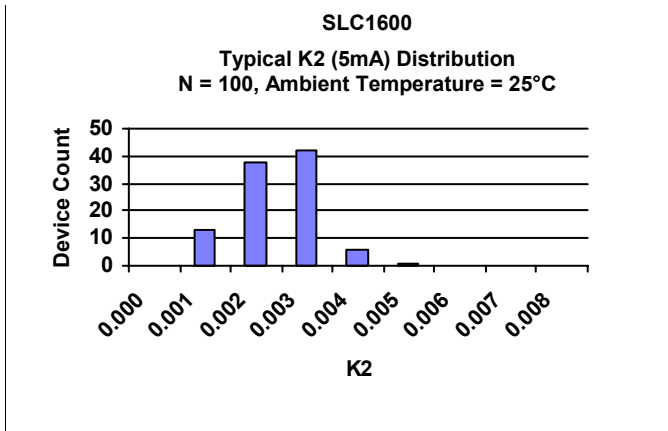
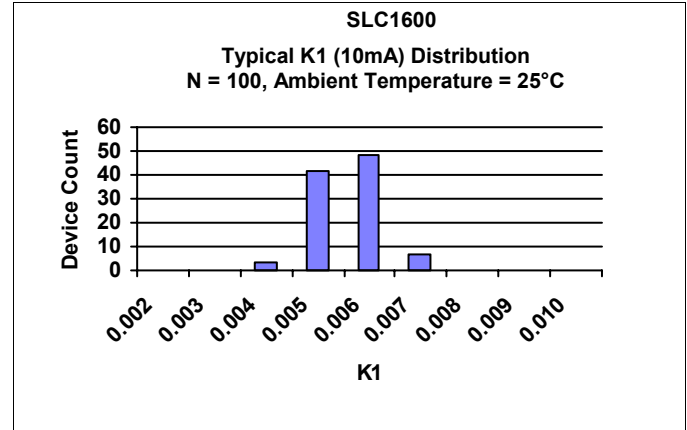
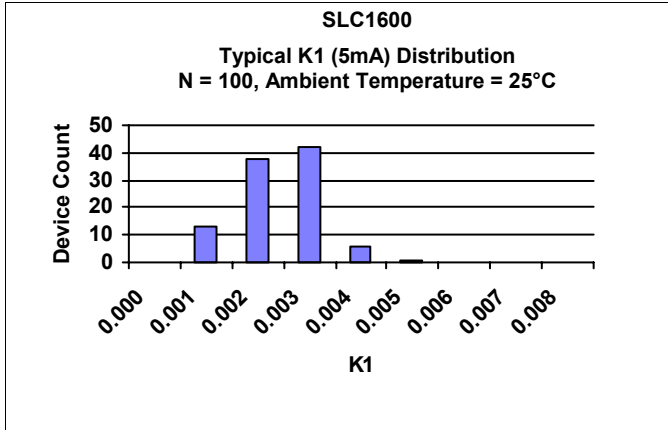
## APPROVALS

- UL / C-UL Approved: File # E201932

**ELECTRICAL CHARACTERISTICS - 25°C**

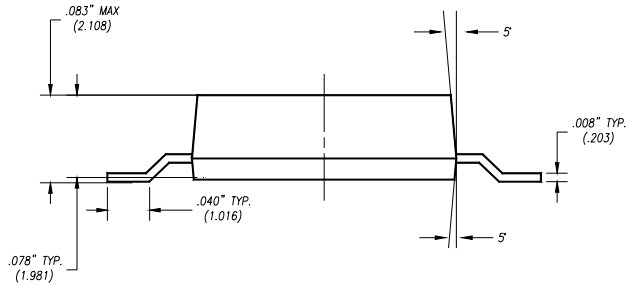
PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
<b>INPUT SPECIFICATIONS</b>					
LED Forward Voltage	V		1.2	1.5	If = 10mA
LED Reverse Voltage	V	6	12		Ir = 10uA
Forward LED Current	m A			40	
<b>COUPLER/DETECTOR CHARACTERISTICS @25°C</b>					
K1 Servo Gain (I1/I <sub>f</sub> )		0.001	0.002	0.01	If = 0.3-1.0mA, Vcc = 15V
K1 Servo Gain (I1/I <sub>f</sub> )		0.002	0.004	0.01	If = 1-10mA, Vcc = 15V
K2 Forward Gain (I2/I <sub>f</sub> )		0.001	0.002	0.01	If = 0.3-1.0mA, Vcc = 15V
K2 Forward Gain (I2/I <sub>f</sub> )		0.002	0.004	0.01	If = 1-10mA, Vcc = 15V
K3 Transfer Gain (K2/K1)		0.98	1	1.02	If = 0.3-10.0mA, Vcc = 15V
Transfer Gain Linearity (ΔK3)	%		0.07	0.1	If = 0.3-10.0mA
Isolation Voltage	V	1500			T = 1 minute
<b>PHOTOCONDUCTIVE OPERATION @25°C</b>					
Frequency Response (-3dB)	k H z		140		If = 10mA, ΔV = 2V
Phase Response	D E G		-45		f = 140kHz

**PERFORMANCE DATA**

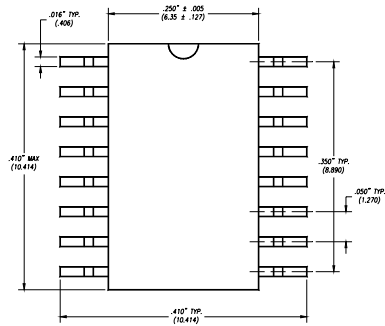


## MECHANICAL DIMENSIONS

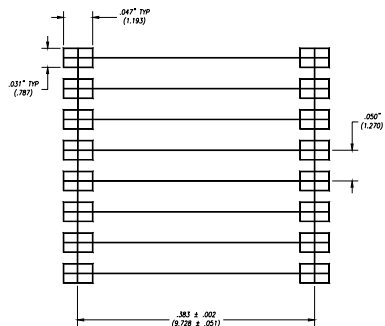
### 16 PIN SMALL OUTLINE INTEGRATED CIRCUIT



END VIEW



TOP VIEW



BOTTOM VIEW/  
BOARD PATTERN

## **DISCLAIMER**

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