



## 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

- High input-to-isolation package (1500Vrms)
- Low input power consumption
- High stability
- Very high servo linearity across temperature

## APPLICATIONS

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

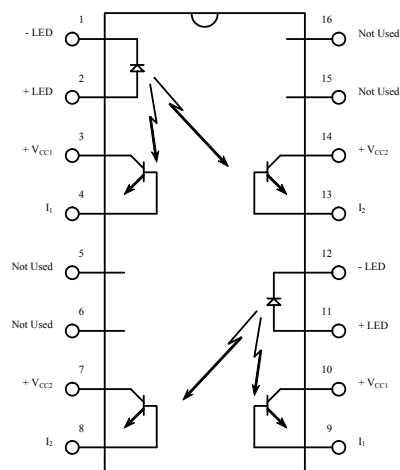
## OPTIONS/SUFFIXES

- -TR Tape and Reel

## 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

## SCHEMATIC DIAGRAM



## APPROVALS

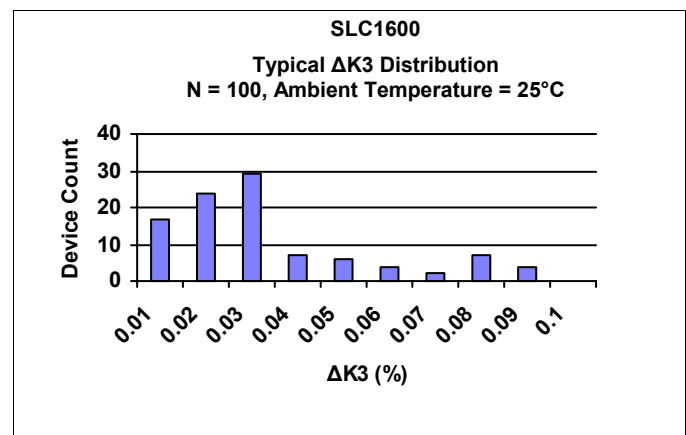
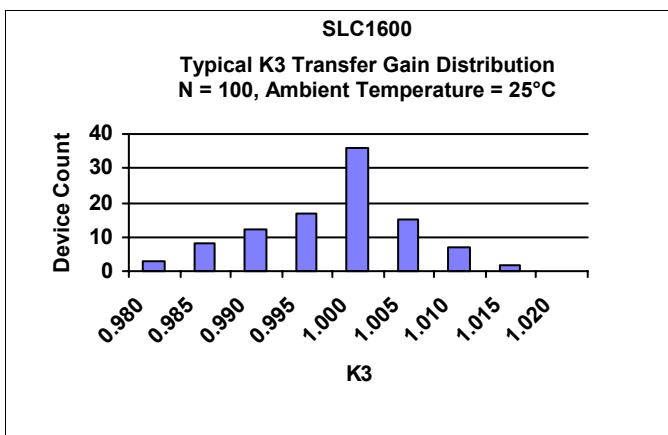
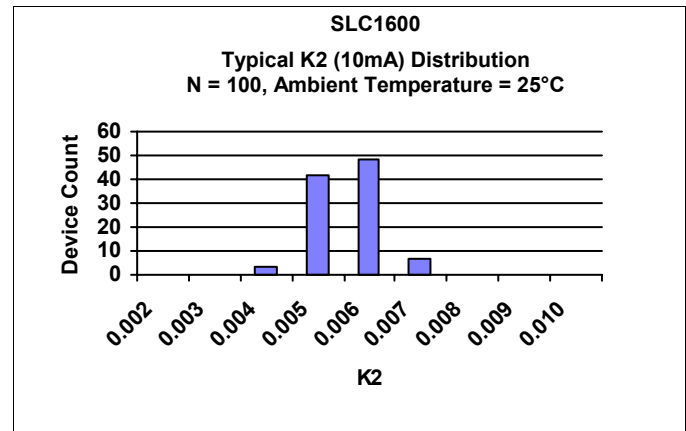
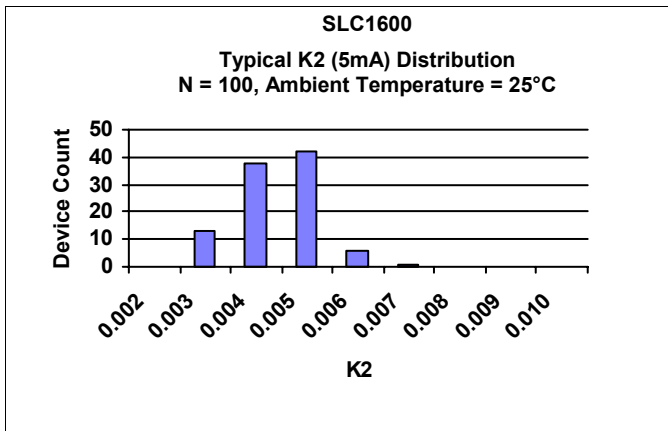
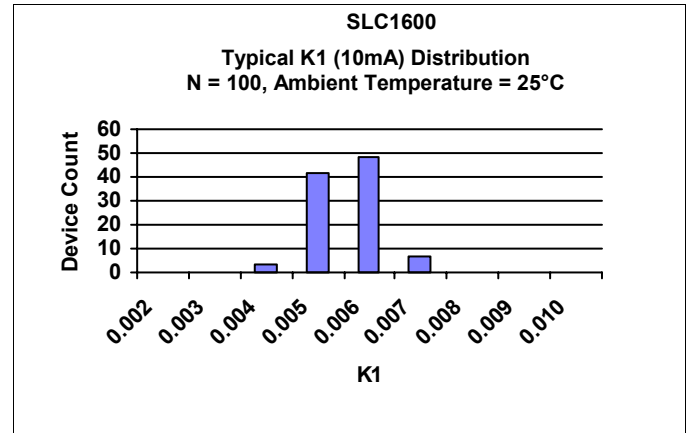
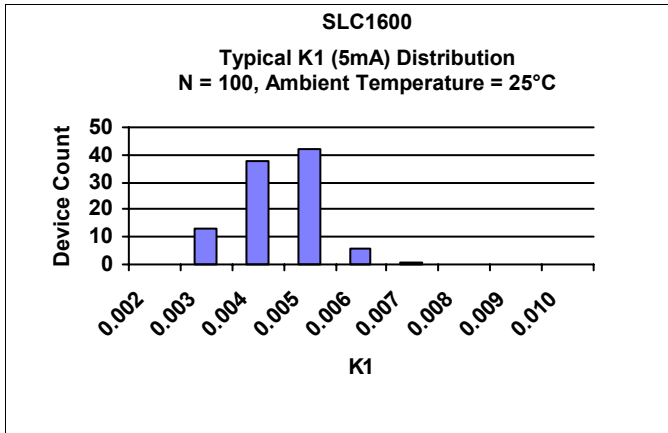
- BABT - Pending
- CSA - Pending
- UL - Pending


**ELECTRICAL CHARACTERISTICS - 25°**

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/If)		0.001	0.002	0.01	If = 0.3-1.0mA, Vcc = 15V
K1 Servo Gain (I1/If)		0.002	0.004	0.01	If = 1-10mA, Vcc = 15V
K2 Forward Gain (I2/If)		0.001	0.002	0.01	If = 0.3-1.0mA, Vcc = 15V
K2 Forward Gain (I2/If)		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 ( $\Delta$ K3)	%		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, $\Delta$ V = 2V
Phase Response	D E G		-45		f = 140kHz



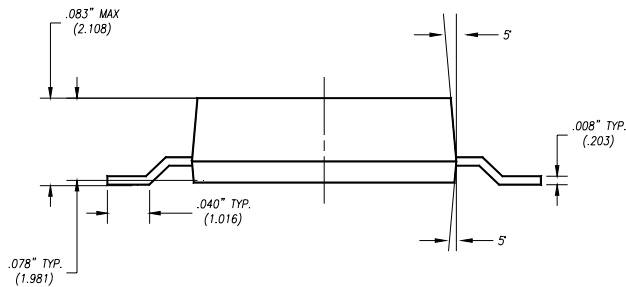
PERFORMANCE DATA



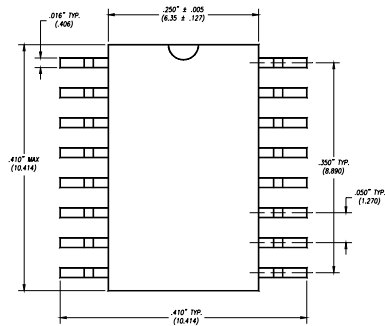


**MECHANICAL DIMENSIONS**

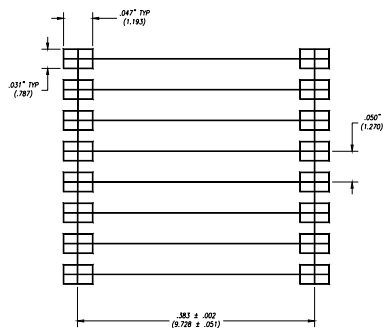
**16 PIN SMALL OUTLINE INTEGRATED CIRCUIT**



**END VIEW**



**TOP VIEW**



**BOTTOM VIEW/  
BOARD PATTERN**