

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

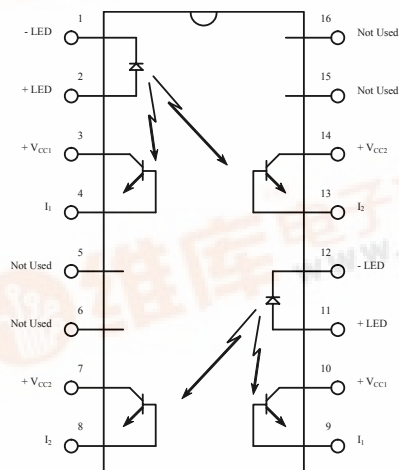
OPTIONS/SUFFIXES

- -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

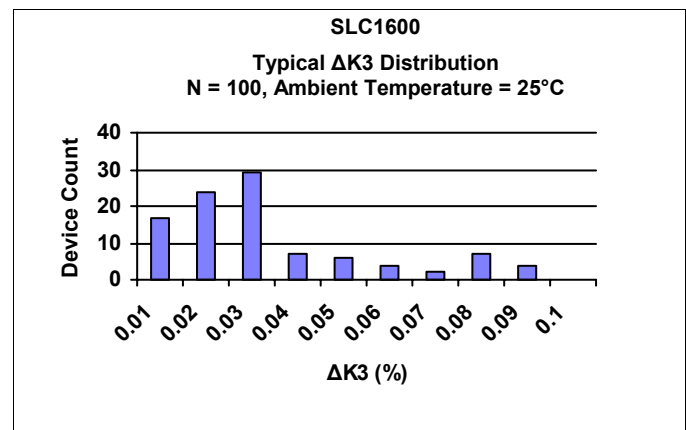
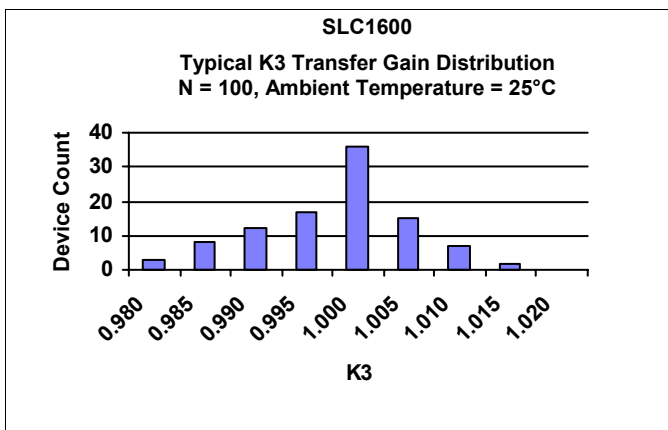
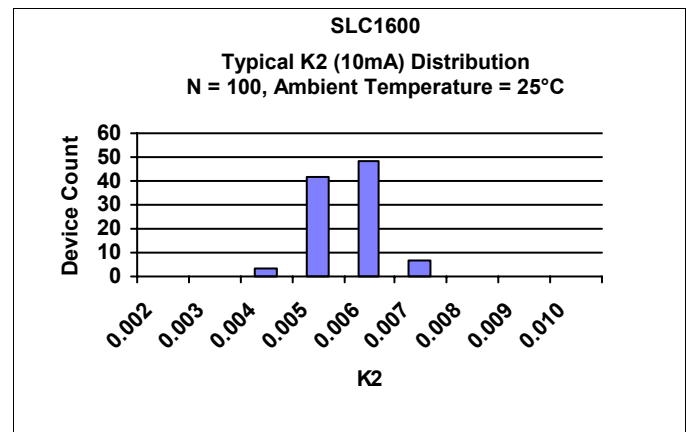
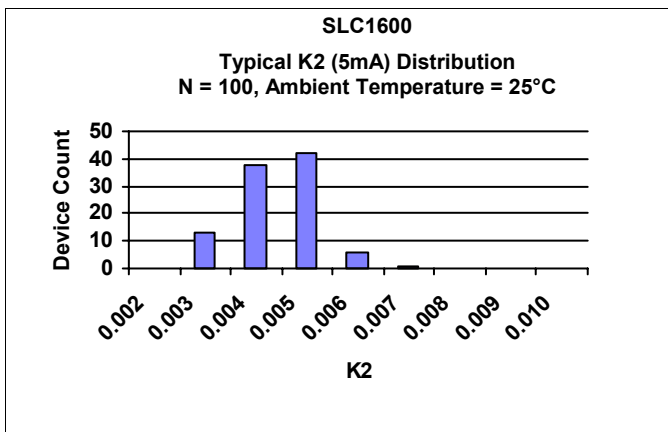
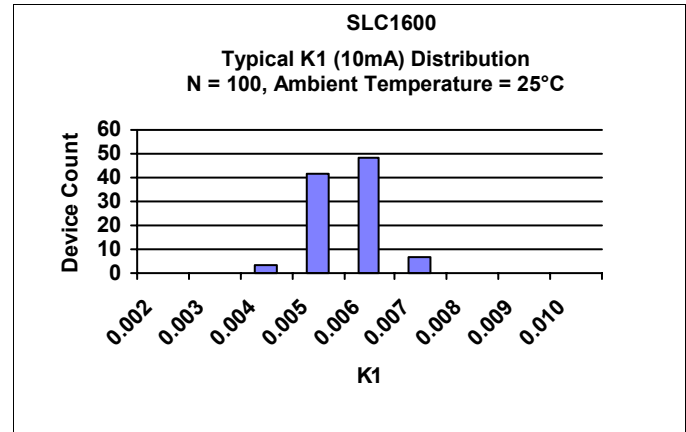
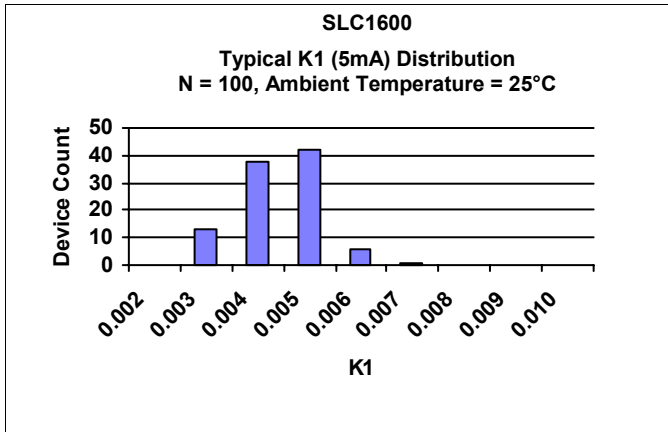


APPROVALS

- BAPT - Pending
- CSA - Pending
- UL - Pending


ELECTRICAL CHARACTERISTICS - 25°

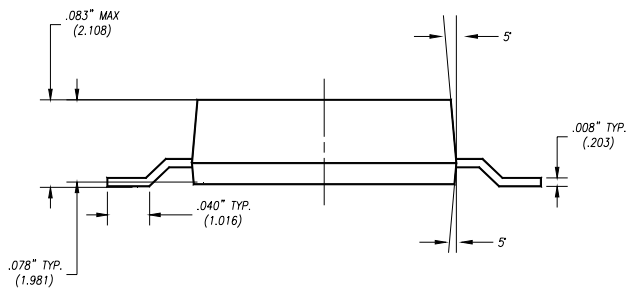
PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
LED Forward Voltage	V		1.2	1.5	If = 10mA
LED Reverse Voltage	V	6	12		Ir = 10uA
Forward LED Current	m A			40	
COUPLER/DETECTOR CHARACTERISTICS @25°C					
K1 Servo Gain (I1/If)		0.001	0.002	0.01	If = 0.3-1.0mA, Vcc = 15V
K1 Servo Gain (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
PHOTOCONDUCTIVE OPERATION @25°C					
Frequency Response (-3dB)	k H z		140		If = 10mA, $\Delta V = 2V$
Phase Response	D E G		-45		f = 140kHz


PERFORMANCE DATA


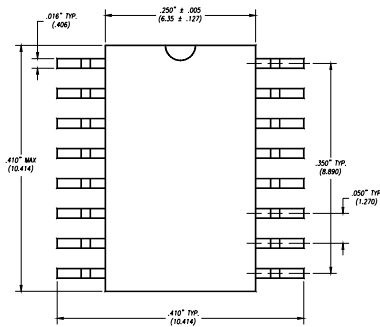


MECHANICAL DIMENSIONS

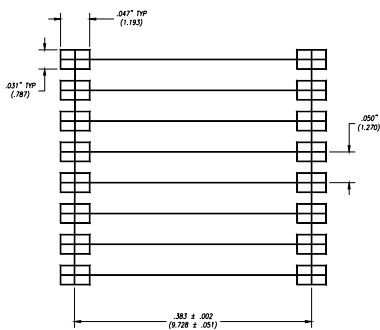
16 PIN SMALL OUTLINE INTEGRATED CIRCUIT



END VIEW



TOP VIEW



BOTTOM VIEW/
BOARD PATTERN