



## DESCRIPTION

The SLC800 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 SLC800 an ideal product for transformer replacement in many medical, industrial and power supply isolation circuits. Its small size makes the SLC800 quite attractive for telecom applications in which board space is limited.

## FEATURES

- High input-to-output 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

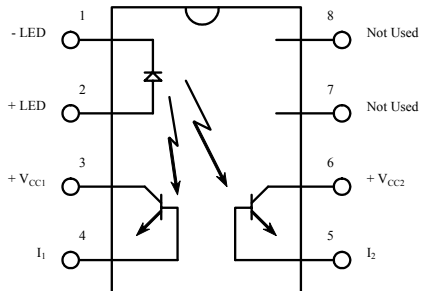
## OPTIONS/SUFFIXES

- -S Surface Mount Option
- -TR Tape and Reel Option

## MAXIMUM RATINGS

PARAMETER	UNIT	MIN	TYP	MAX
Storage Temperature	°C	-55		125
Operating Temperature	°C	-40		85
Continuous Input Current	mA			40
Transient Input Current	mA			400
Reverse Input Control Voltage	V	6		
Output Power Dissipation	mW			500

## SCHEMATIC DIAGRAM



## APPROVALS

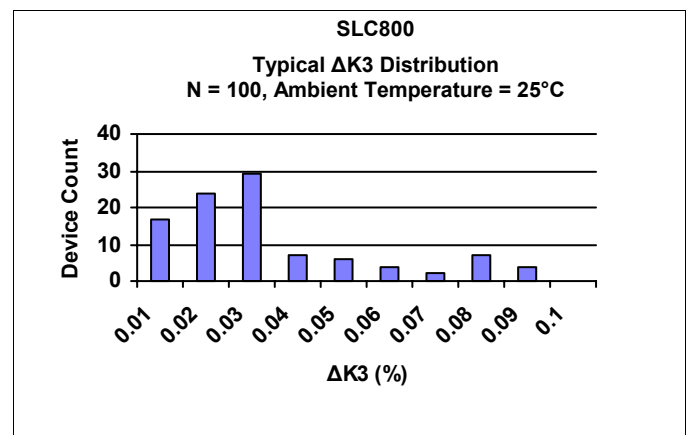
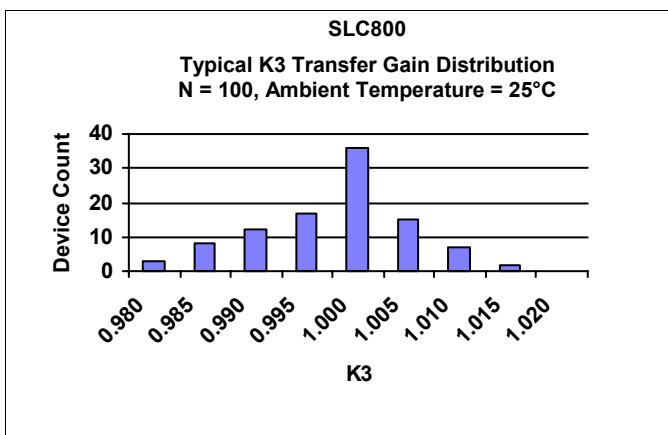
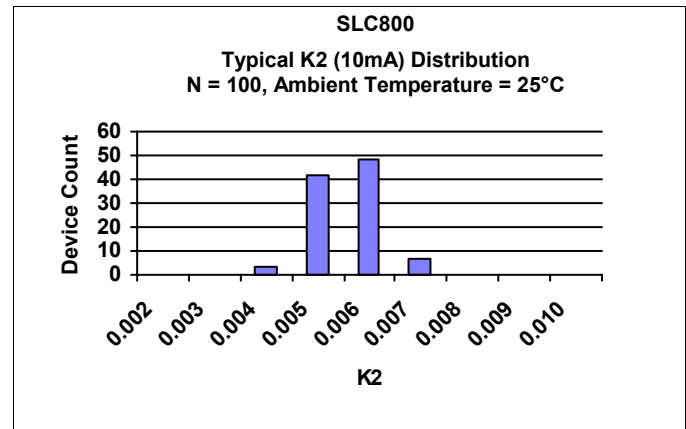
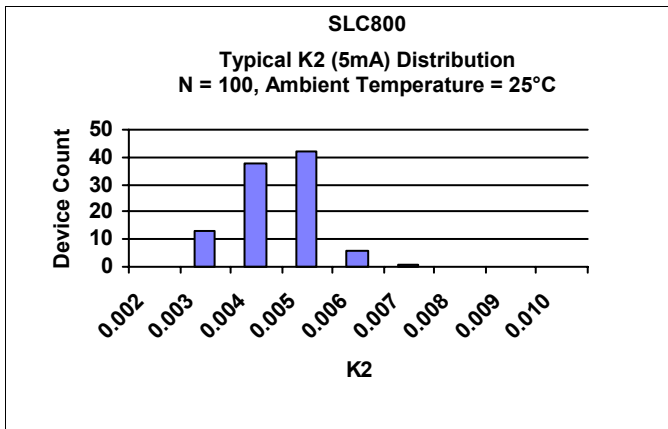
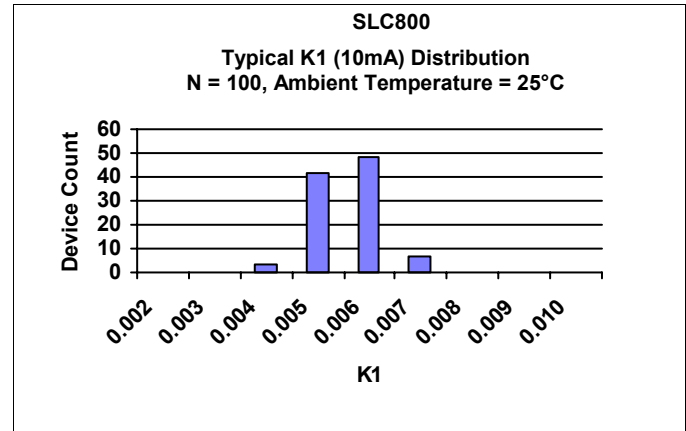
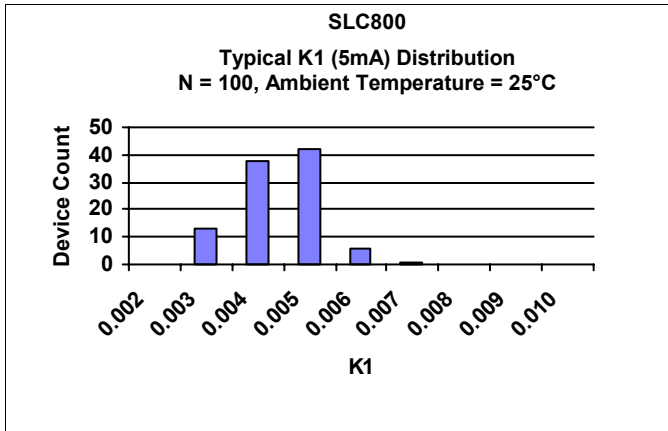
- BABT - Pending
- CSA - Pending
- UL - Pending


**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	%		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)			140		If = 10mA, dV = 2V
Phase Response			-45		f = 140kHz



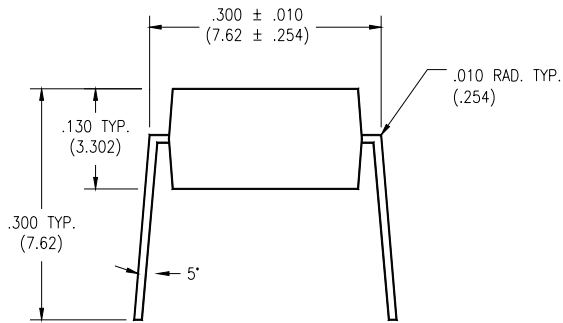
PERFORMANCE DATA



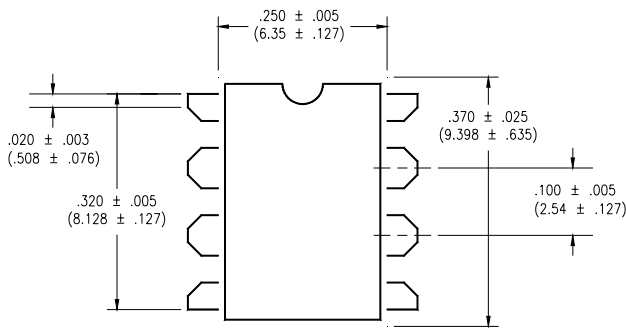


**MECHANICAL DIMENSIONS**

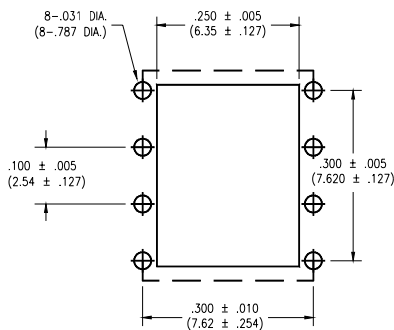
**8 PIN DUAL IN-LINE PACKAGE**



**END VIEW**

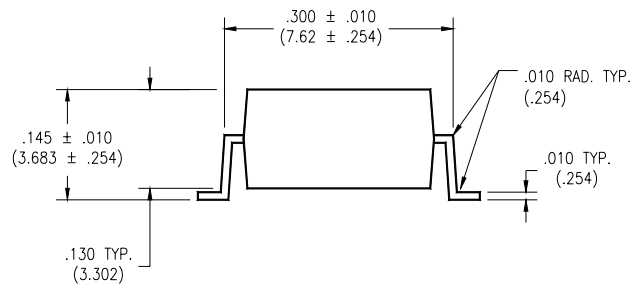


**TOP VIEW**

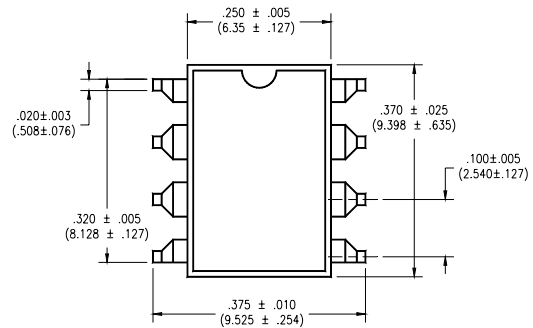


**BOTTOM VIEW/  
BOARD PATTERN**

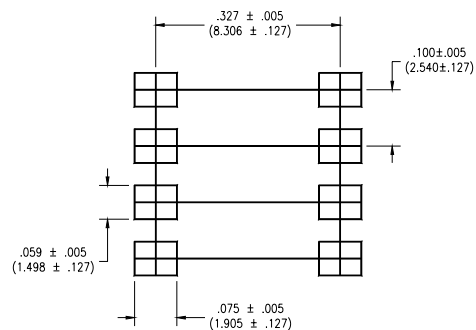
**8 PIN SURFACE MOUNT DEVICE**



**END VIEW**



**TOP VIEW**



**BOTTOM VIEW/  
BOARD PATTERN**