



DC Input
Optocoupler

DESCRIPTION

The SOC600 consists of a phototransistor optically coupled to a light emitting diode. Optical coupling between the input LED and output phototransistor allows for high isolation levels while maintaining low-level DC signal control capability. The SOC600 provides an optically isolated method of controlling many interface applications such as telecommunications, industrial control and instrumentation circuitry.

FEATURES

- High input-to-isolation package
- Low input power consumption
- High stability

APPLICATIONS

- Loop current detection
- Ring signal detection
- Power supply feedback isolation
- Audio signal interface
- Transformer replacement

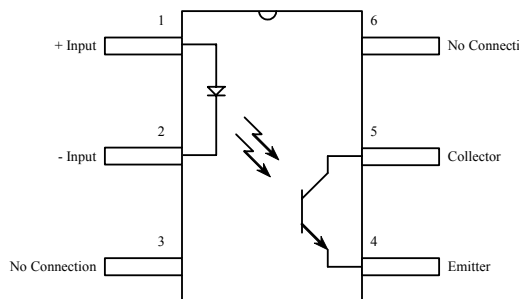
OPTIONS/SUFFIXES

- -H High Output Isolation
- -S Surface Mount Option
- -TR Tape and Reel

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



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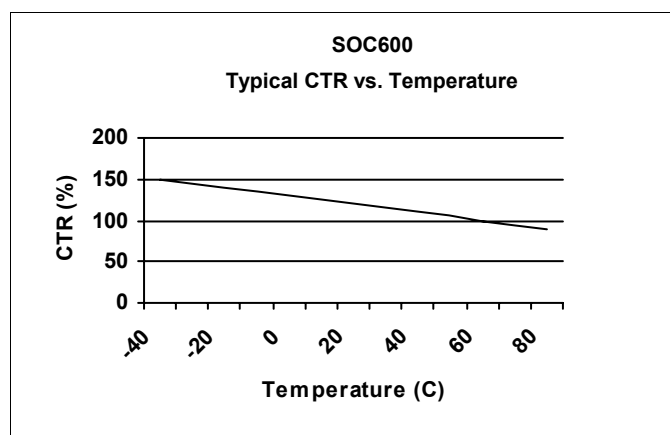
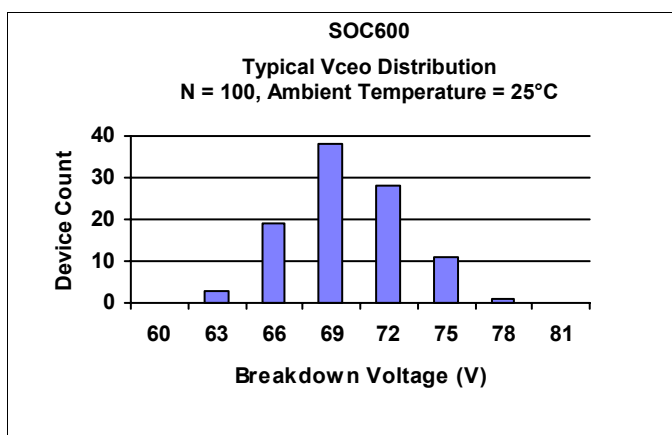
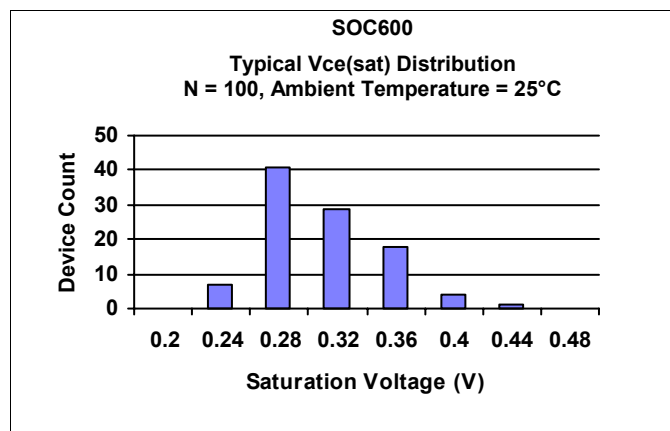
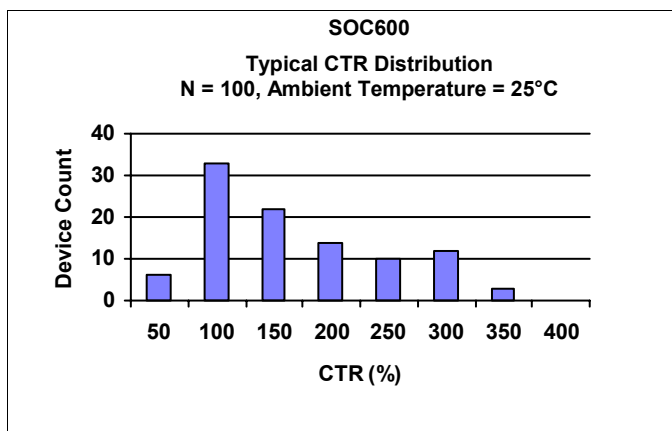
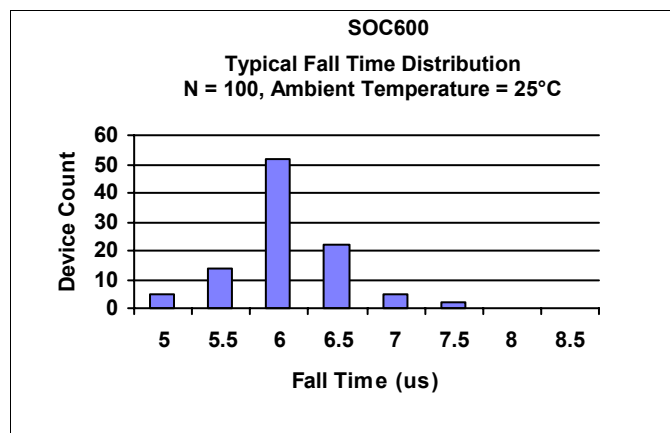
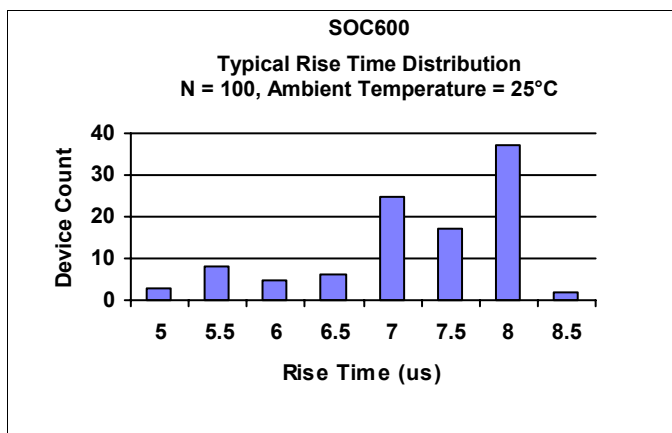
ELECTRICAL CHARACTERISTICS - 25°

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
OUTPUT SPECIFICATIONS					
Collector-Emitter Breakdown Voltage	V	60			Ic = 10uA
Emitter-Collector Breakdown Voltage	V	7			Ie = 10uA
Dark Current	n A			500	Vce = 20V
Output Capacitance	p F		6		Vce = 0V, f=1.0kHz
Saturation Voltage	V		0.3	0.5	If = 5mA, Ic = 10mA
Current Transfer Ratio	%	30	100	800	If = 2mA, Vce = 5V
Rise Time	μ s		8		If = 10mA, Vcc = 10V, Rc = 500 ohms
Fall Time	μ s		8		If = 10mA, Vcc = 10V, Rc = 500 ohms
COUPLED SPECIFICATIONS					
Isolation Voltage	V	2500			T = 1 minute
-H Suffix	V	3750			T = 1 minute
Isolation Resistance	G Ω	100			



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PERFORMANCE DATA

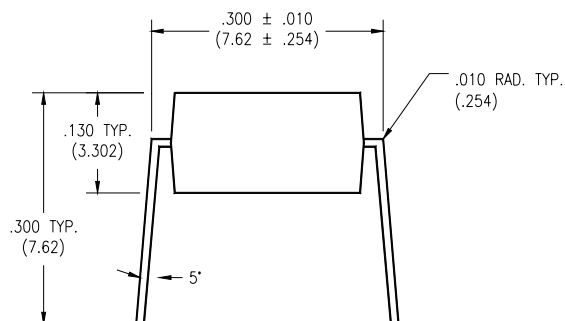




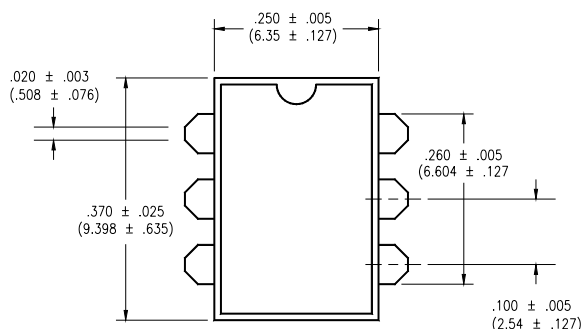
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MECHANICAL DIMENSIONS

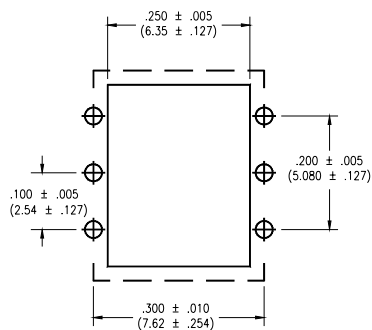
6 PIN DUAL IN-LINE PACKAGE



END VIEW

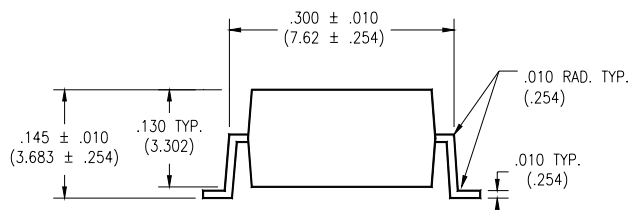


TOP VIEW

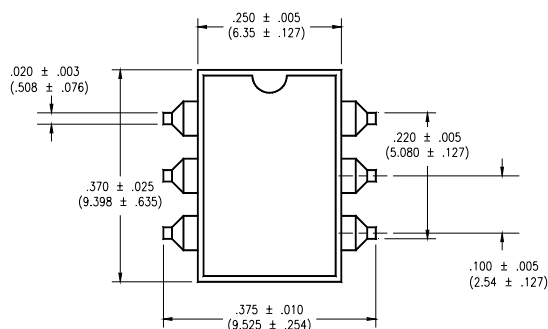


BOTTOM VIEW/
BOARD PATTERN

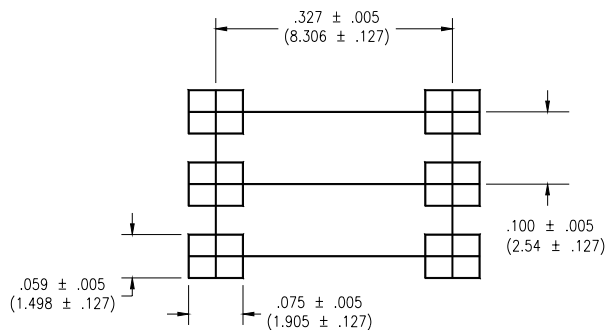
6 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



BOTTOM VIEW/
BOARD PATTERN