SDD600

DC Input
Optocoupler

DESCRIPTION

The SDD600 consists of a photo Darlington transistor 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 SDD600 provides an optically isolated method of controlling many interface applications such as telecommunications, industrial control and instrumentation circuitry.

FEATURES

- High current transfer ratio (with Vce=300V MIN)
- High input-to-isolation package (5000 Vrms)
- Compact dual-in-line package

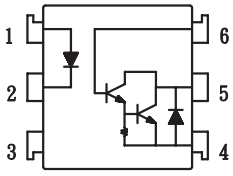
APPLICATIONS

- System appliances, measuring instruments
- Industrial robots
- Copiers, automated vending machines
- Signal transmission between varying circuits
- Telephone sets
- Fax machines
- Interface with various power supply circuits
- Numerical control machines

OPTIONS/SUFFIXES

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

SCHEMATIC DIAGRAM



1. Anode
2. Cathode
3. NC
4. Emitter
5. Collector
6. Base

MAXIMUM RATINGS

PARAMETER	UNIT	MIN	TYP	MAX
Forward Current (If)	mA			50
Peak Forward Current	A			1
Reverse Voltage	V			6
Total Power Dissipation	mW			200
Storage Temperature	°C	-55		125
Operating Temperature	°C	-40		100

APPROVALS

- UL & C-UL Approved File # E201932

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SOLID STATE OPTRONICS

SDD600


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ELECTRICAL CHARACTERISTICS - 25°

PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
LED Forward Voltage	V		1.2	1.4	If = 20mA
LED Peak Forward Voltage	V			3.5	Ifm = 0.5A
Reverse Current	μ A			10	Vr=4V
OUTPUT SPECIFICATIONS					
Collector-Emitter Voltage	V	300			
Collector-Base Voltage	V	300			
Dark Current	μ A			1	Vce = 200V, If=0
Floating Capacitance	p F		0.6	1	Vce = 0V, f=1.0MHz
Saturation Voltage	V			1.5	If = 20mA, Ic = 5mA
Current Transfer Ratio	%	600		9000	If = 1mA, Vce = 2V
Rise Time	μ s		60		Ic = 20mA, Vce = 2V, Rc = 100 ohms
Fall Time	μ s		50		Ic = 20mA, Vce = 2V, Rc = 100 ohms
COUPLED SPECIFICATIONS					
Isolation Voltage	V	5000			T = 1 minute
Isolation Resistance	G Ω	50			
Cut off Frequency	k H z		7		Ic = 2mA, Vcc = 5V, Rc = 100 ohms

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Fig.1 Current Transfer Ratio vs. Forward Current

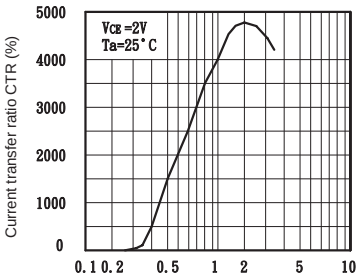


Fig.2 Collector Power Dissipation vs. Ambient Temperature

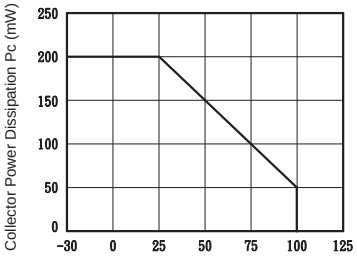


Fig.3 Collector Dark Current vs. Ambient Temperature

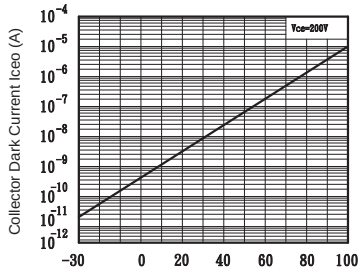


Fig.4 Forward Current vs. Ambient Temperature

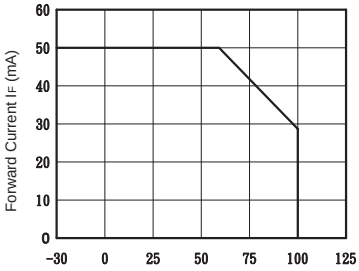


Fig.5 Forward Current vs. Forward Voltage

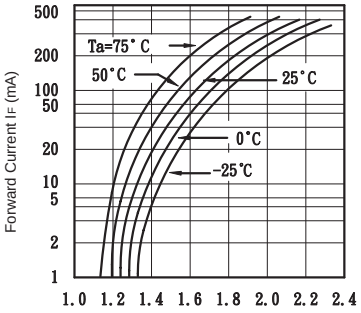


Fig.6 Collector Current vs. Collector-emitter Voltage

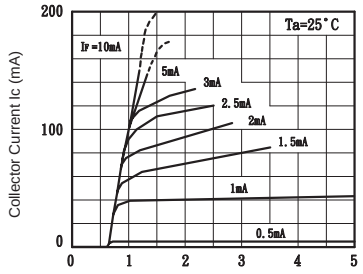


Fig.7 Relative Current Transfer Ratio vs. Ambient Temperature

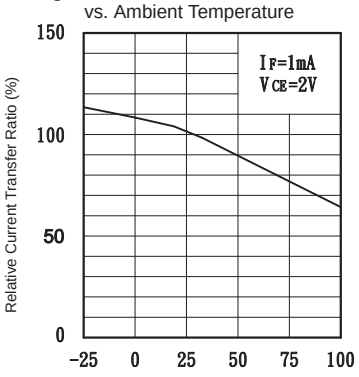
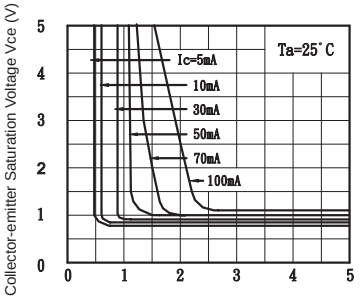
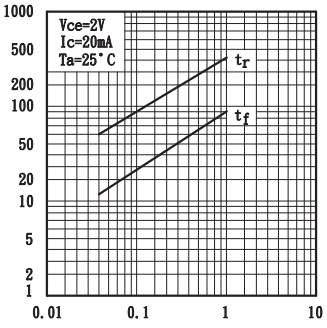


Fig.8 Collector-emitter Saturation Voltage vs. Forward Current





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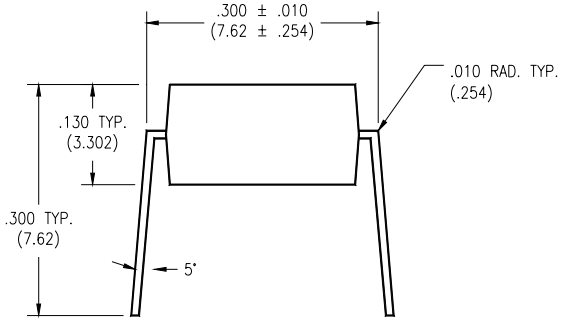
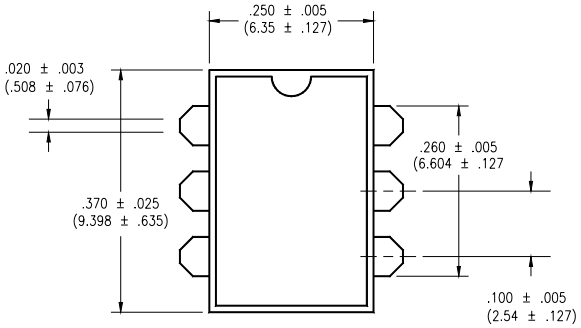
MECHANICAL DIMENSIONS

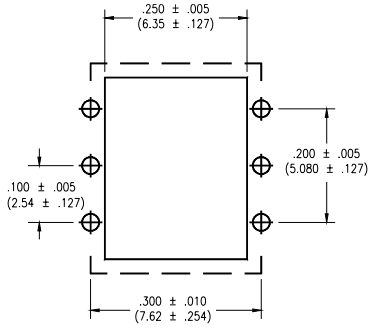
6 PIN DUAL IN-LINE PACKAGE



END VIEW

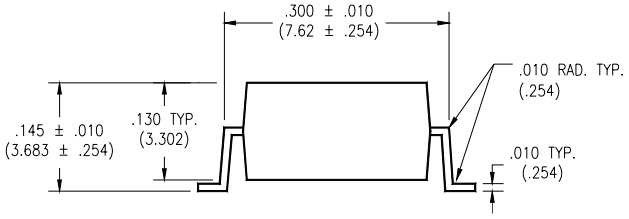


TOP VIEW

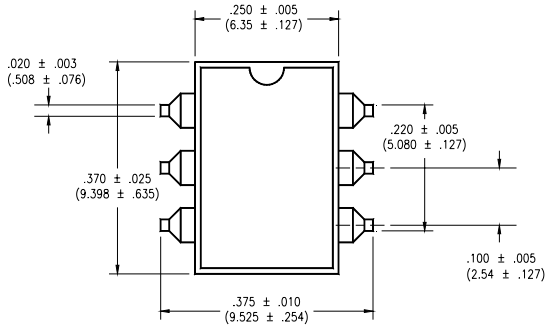


BOTTOM VIEW/
BOARD PATTERN

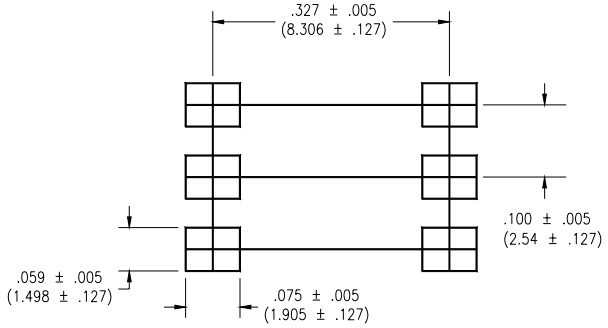
6 PIN SURFACE MOUNT DEVICE



END VIEW



TOP VIEW



BOTTOM VIEW/
BOARD PATTERN

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