



DC Input  
Optocoupler

## DESCRIPTION

The SDD601 consists of a photo Darlington transistor optically coupled to a light emitting diode. Optical coupling between the input LED and output photo Darlington transistor allows for high isolation levels while maintaining low-level DC signal control capability. The SDD601 provides an optically isolated method of controlling many interface applications such as telecommunications, industrial control and instrumentation circuitry.

## FEATURES

- High current transfer ratio (CTR:MIN 500%)
- High input-to-output 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

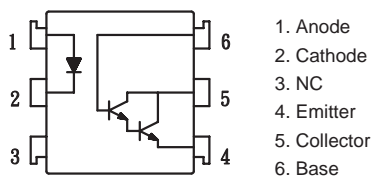
## OPTIONS/SUFFIXES

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

## MAXIMUM RATINGS

PARAMETER	UNIT	MIN	TYP	MAX
Forward Current (I <sub>f</sub> )	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

## SCHEMATIC DIAGRAM



## APPROVALS

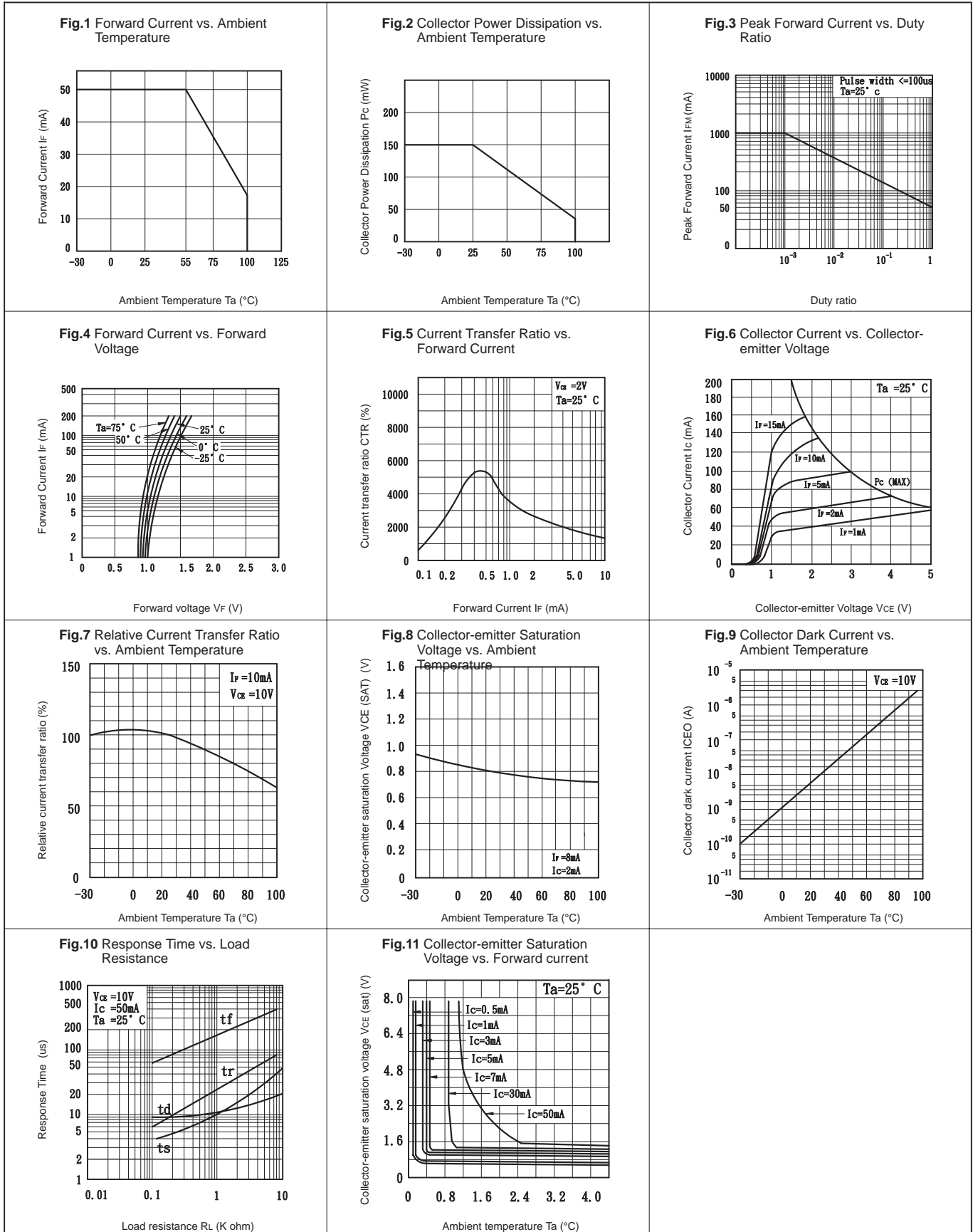
- UL and C-UL Approved File# E201932



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**ELECTRICAL CHARACTERISTICS - 25°**

PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
<b>INPUT SPECIFICATIONS</b>					
LED Forward Voltage	V		1.2	1.4	If = 20mA
Peak Forward Voltage	V			3.5	Ifm=0.5A
<b>OUTPUT SPECIFICATIONS</b>					
Collector-Emitter Breakdown Voltage	V			30	
Collector-Base Voltage	V			30	
Dark Current	μ A			0.1	Vce = 10V, If=0
Floating Capacitance	p F		0.6	1	Vce = 0V, f=1.0MHz
Saturation Voltage	V			1.5	If = 8mA, Ic = 2mA
Current Transfer Ratio	%	500			If = 1mA, Vce = 2V
Rise Time	μ s		5	30	Ic = 2mA, Vce = 10V, Rc = 100 ohms
Fall Time	μ s		60	80	Ic = 2mA, Vce = 10V, Rc = 100 ohms
<b>COUPLED SPECIFICATIONS</b>					
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

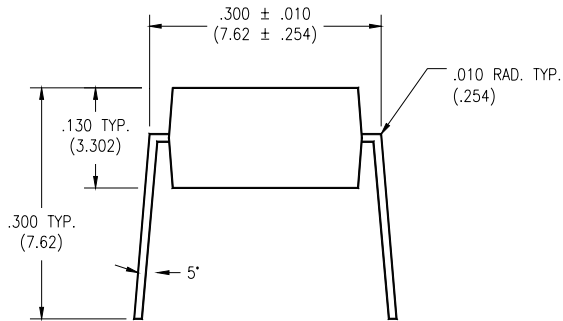




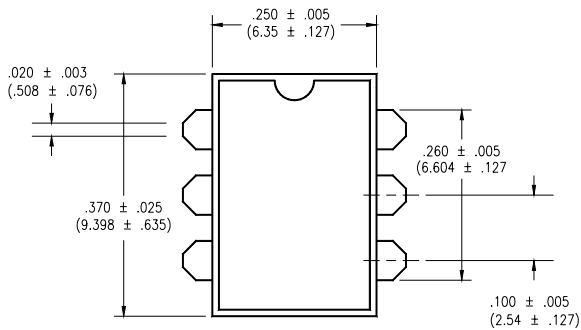
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**MECHANICAL DIMENSIONS**

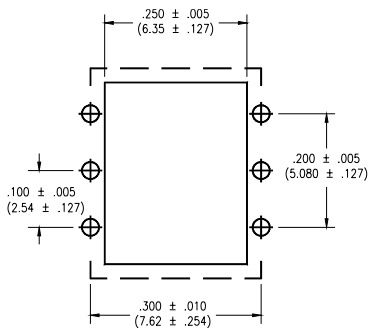
**6 PIN DUAL IN-LINE PACKAGE**



**END VIEW**

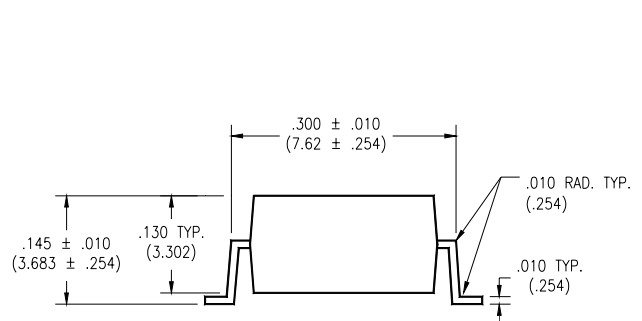


**TOP VIEW**

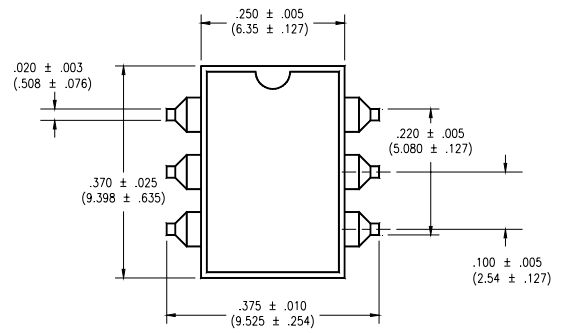


**BOTTOM VIEW/  
BOARD PATTERN**

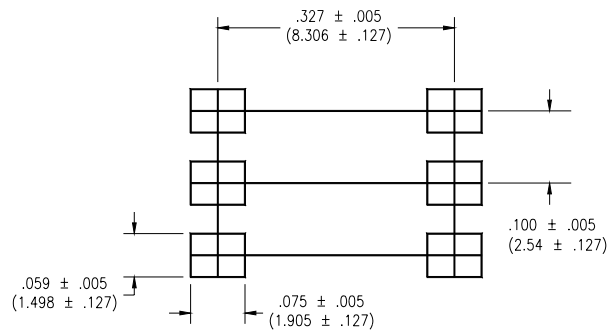
**6 PIN SURFACE MOUNT DEVICE**



**END VIEW**



**TOP VIEW**



**BOTTOM VIEW/  
BOARD PATTERN**