



DESCRIPTION

The SDT400 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 SDT400 provides an optically isolated method of controlling many interface applications such as telecommunications, industrial control and instrumentation circuitry.

FEATURES

- High input-to-output isolation package (5000 Vrms)
- Low input power consumption
- High stability
- Miniature 4 pin DIP package
- CTR Range 50-600%

APPLICATIONS

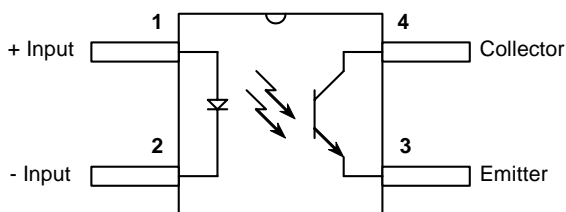
- Registers, copiers, Automatic Vending Machines
- System appliances, measuring instruments
- Computer terminals, PLCs
- Telecommunications, telephones
- Home Appliances
- Digital logic inputs
- Microprocessor inputs
- Switching power supply

OPTIONS/SUFFIXES*

- -H .04" (10.16mm) lead spacing (VDE0884)
- -S Surface Mount Option
- -TR Tape and Reel Option

NOTE: Suffixes listed above are not included in marking on device for part number identification.

SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS*

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

*The values indicated are absolute stress ratings. Functional operation of the device is not implied at these or any conditions in excess of those defined in electrical characteristics section of this document. Exposure to Absolute Ratings may cause permanent damage to the device and may adversely affect reliability.

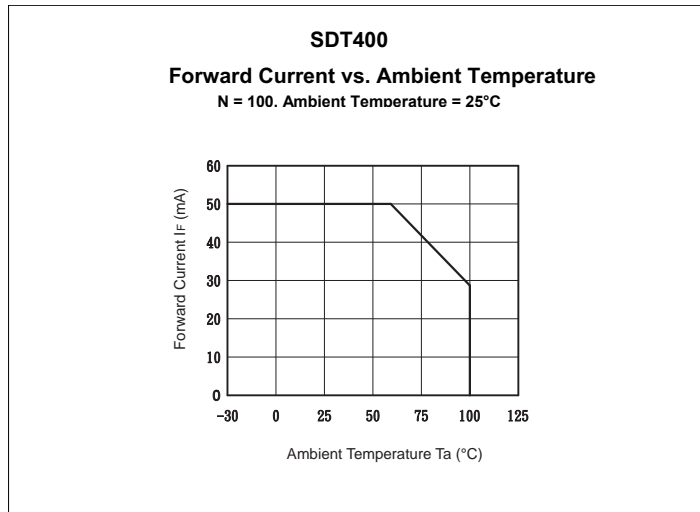
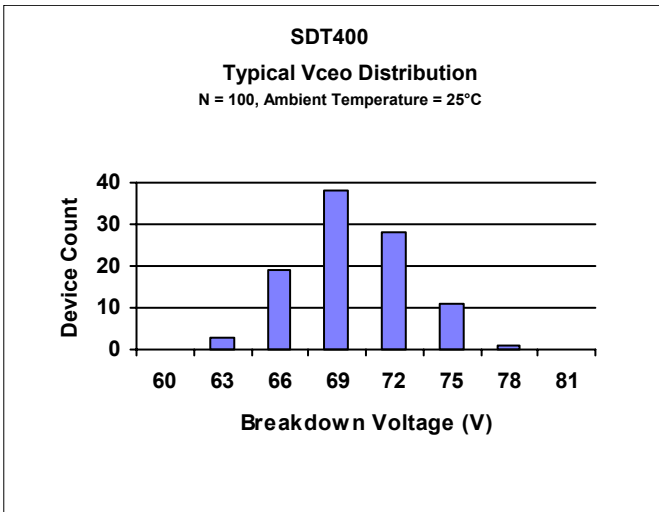
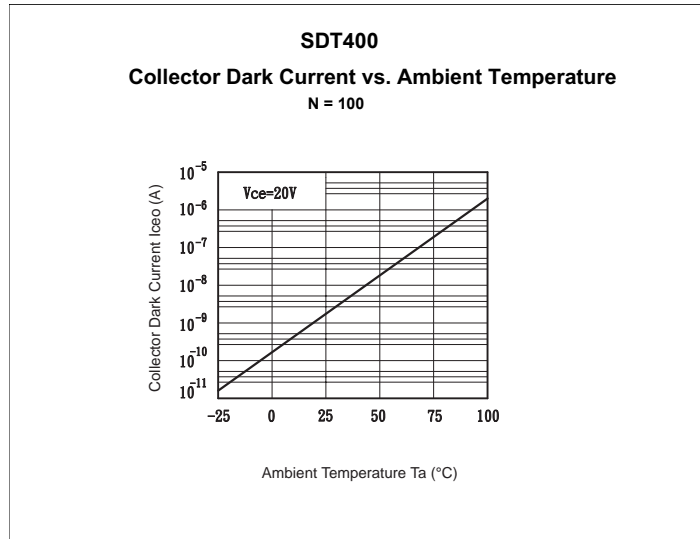
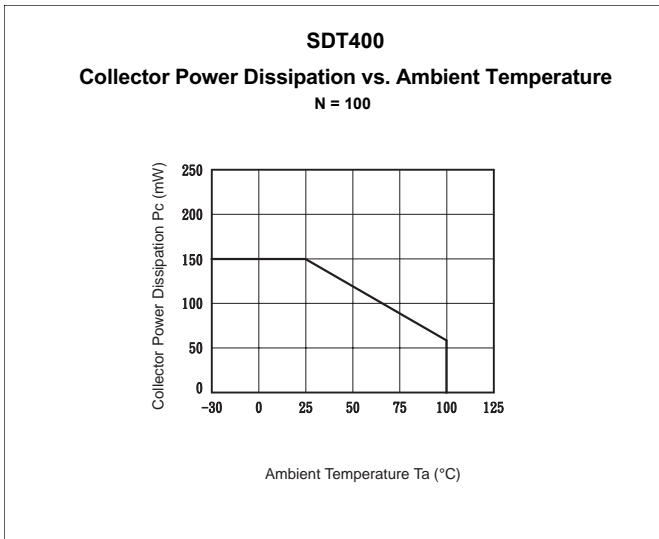
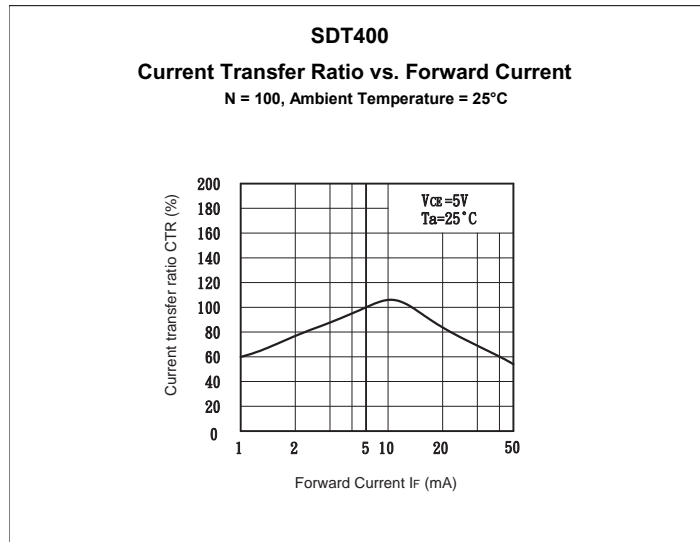
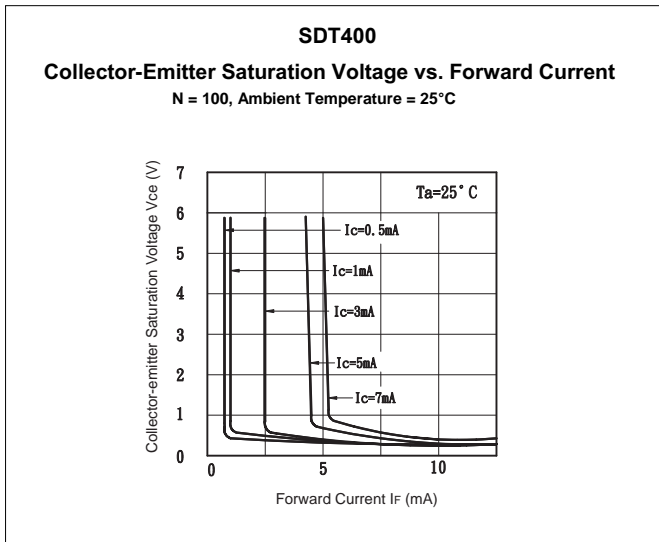
APPROVALS

- UL and C-UL Approved, File #E201932
- VDE Approved, Lic # 40011227

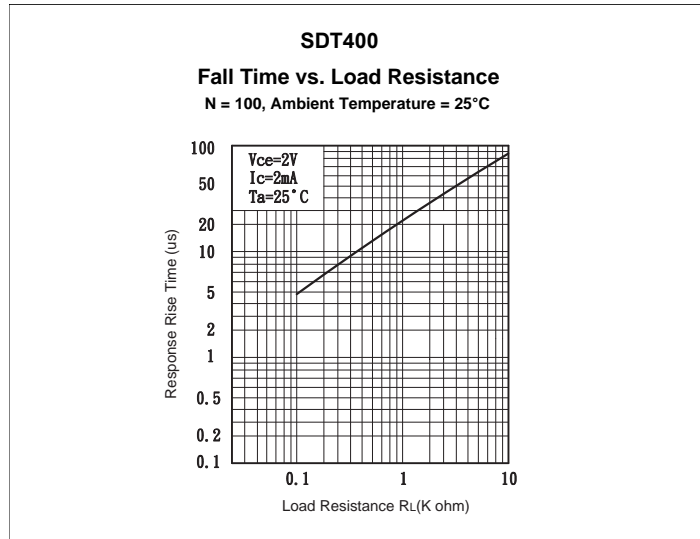
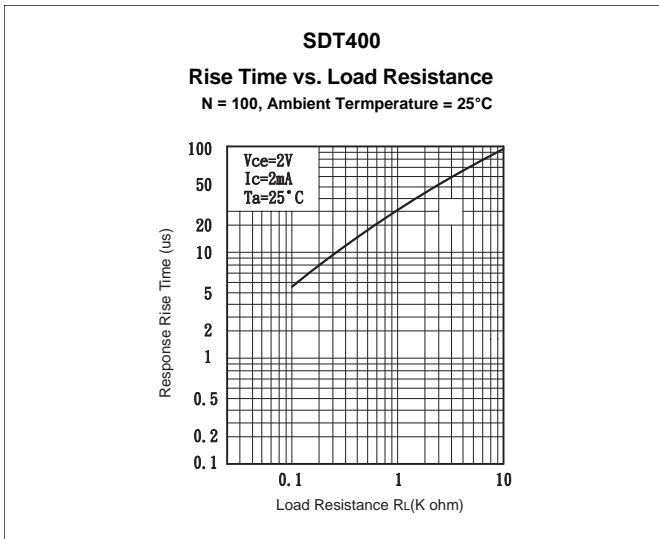
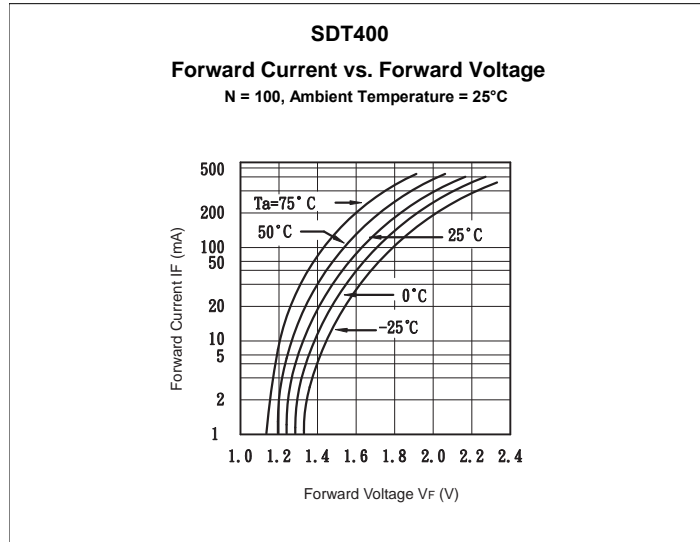
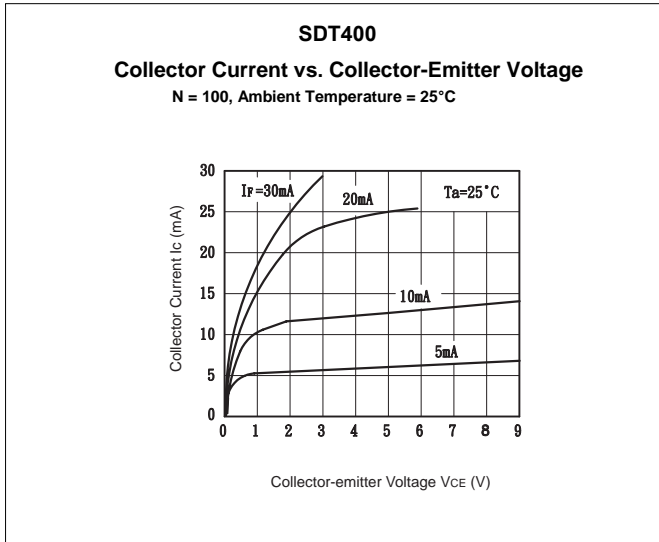
ELECTRICAL CHARACTERISTICS - 25°C

PARAMETER	UNIT	MIN	TYP	MAX	TEST CONDITIONS
INPUT SPECIFICATIONS					
Forward Voltage	V		1.2	1.4	If = 20mA
Reverse Current	μ A			10	Vr = 4V
OUTPUT SPECIFICATIONS					
Collector-Emitter Breakdown Voltage	V	60			Ic = 10uA
Emitter-Collector Breakdown Voltage	V	6			Ie = 10uA
Dark Current	μ A			0.1	Vce = 20V
Floating Capacitance	p F		0.6	1	V = 0, f=1MHz
Saturation Voltage	V		0.1	0.2	If = 20mA, Ic = 1mA
Current Transfer Ratio	%	50		600	If = 5mA, Vce = 5V
Rise Time	μ s		4		Ic = 2mA, Vcc = 2V, Rc = 100 ohms
Fall Time	μ s		3		Ic = 2mA, Vcc = 2V, Rc = 100 ohms
COUPLED SPECIFICATIONS					
Isolation Voltage	V	5000			T = 1 minute
Isolation Resistance	G Ω	50			
CTR CLASSIFICATION					
-A	%	60		160	
-B	%	130		260	
-C	%	200		400	
-D	%	300		600	
-E	%	50		600	

PERFORMANCE DATA

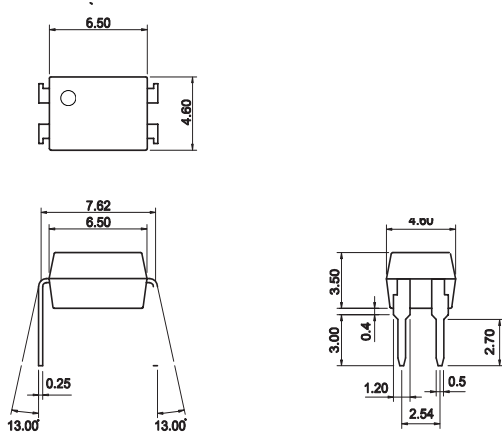


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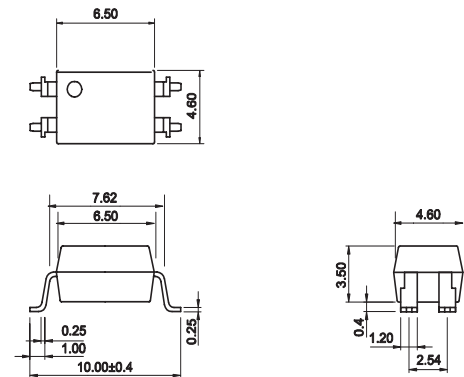
MECHANICAL DIMENSIONS

4 PIN DUAL IN-LINE PACKAGE (SDT400)



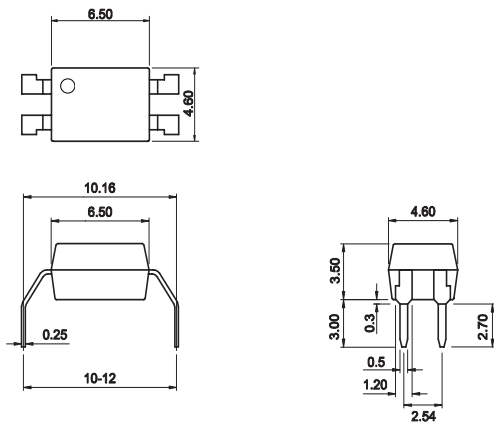
TOLERANCE : $\pm 0.2\text{mm}$

4 PIN SURFACE MOUNT DEVICE (SDT400-S)



TOLERANCE : $\pm 0.2\text{mm}$

4 PIN H TYPE WITH 0.4" LEAD SPACING (SDT400-H)



TOLERANCE : $\pm 0.2\text{mm}$

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