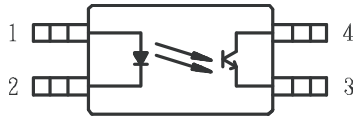


### Schematic:



For dimensions and pin-outs, see the last page of this document.

### Features:

1. High isolation voltage (  $BV = 2500 \text{ Vrms}$  )
2. Small and thin package ( 4pin SOP, Pin pitch 1.27mm )
3. High collector to emitter voltage (  $V_{ce0} = 80 \text{ V}$  )
4. High-speed switching (  $t_r = 3 \text{ us TYP.}$ ,  $t_f = 5 \text{ us TYP.}$  )

### Ordering:

Suffix to Standard Part Number

- V = VDE Compliant
- G = 10mm Lead Spread
- S = Surface Mount Lead-form
- T = Tape & Reel

### Equivalents:

This part equals/exceeds all specifications of:

- PC3H7
- PS2801-1
- TLP281

### Absolute Maximum Ratings:

(T<sub>a</sub>=25°C)

	Parameter	Symbol	Rating	Unit
Input	Forward current (DC)	I <sub>F</sub>	50	mA
	Reverse voltage	V <sub>R</sub>	6	V
	Power dissipation derating	P <sub>D</sub> /°C	0.6	mW/°C
	Power dissipation	P <sub>D</sub>	60	mW
	Peak forward current <sup>*1</sup>	I <sub>FP</sub>	1	A
Output	Collector-emitter voltage	V <sub>CEO</sub>	80	V
	Emitter-collector voltage	V <sub>ECO</sub>	6	V
	Collector current	I <sub>C</sub>	50	mA
	Power dissipation derating	P <sub>C</sub>	1.2	mW/°C
	Total power dissipation	P <sub>tot</sub>	120	mW
	Isolation voltage <sup>*2</sup>	V <sub>iso</sub>	2500	V <sub>rms</sub>
	Operating temperature	T <sub>opr</sub>	-30 to +100	°C
	Storage temperature	T <sub>stg</sub>	-55 to +125	°C

\*1 PW=100us, Duty Cycle-1%

\*2 AC voltage for 1 minute at T<sub>A</sub>=25°C, RH=60% between input and output.

### Electrical Characteristics:

(T<sub>a</sub>=25°C)

	Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V <sub>F</sub>	I <sub>F</sub> =5mA	—	1.1	1.4	V
	Reverse current	I <sub>R</sub>	V <sub>R</sub> =5V	—	—	5	uA
	Terminal capacitance	C <sub>t</sub>	V=0V, f=1.0kHz	—	30	—	pF
Output	Collector dark current	I <sub>CEO</sub>	V <sub>CE</sub> =80V, I <sub>F</sub> =0mA	—	—	100	nA
Transfer characteristics	Current transfer ratio	CTR	I <sub>F</sub> =5mA, V <sub>CE</sub> =5V	80	—	600	%
	Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>F</sub> =10mA, I <sub>C</sub> =2mA	—	—	0.3	V
	Isolation resistance	R <sub>i-o</sub>	DC500V	5X10 <sup>10</sup>	10 <sup>11</sup>	—	ohm
	Floating capacitance	C <sub>i-o</sub>	V=0V, f=1.0MHz	—	0.4	—	pF
	Response time(Rise)	t <sub>r</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA, R <sub>L</sub> =100ohm	—	3	—	us
	Response time(Fall)	t <sub>f</sub>		—	5	—	

\*1 Test circuit for switching time.

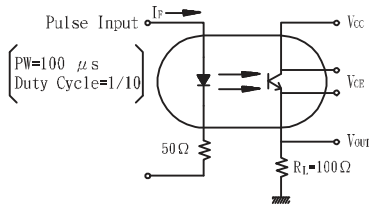


Fig.1 Current Transfer Ratio vs. Forward Current

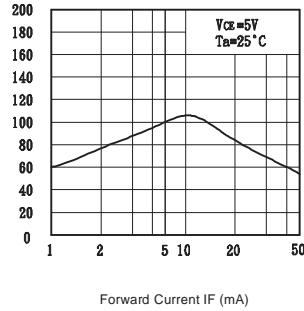


Fig.2 Collector Power Dissipation vs. Ambient Temperature

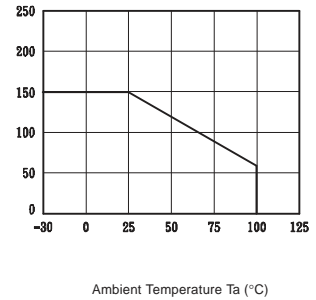


Fig.3 Collector Dark Current vs. Ambient Temperature

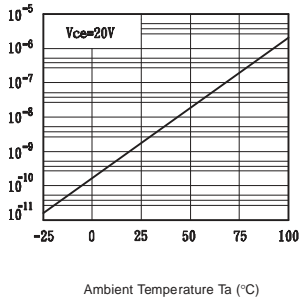


Fig.4 Forward Current vs. Ambient Temperature

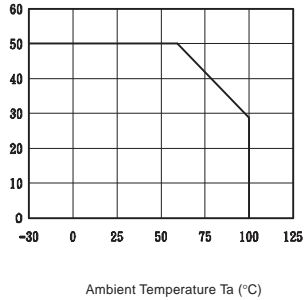


Fig.5 Forward Current vs. Forward Voltage

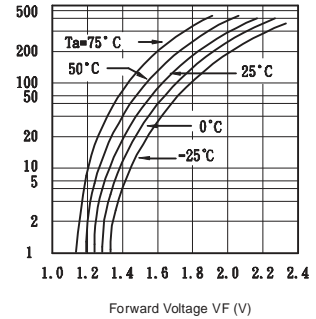


Fig.6 Collector Current vs. Collector-emitter Voltage

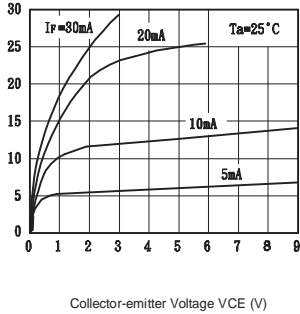


Fig.7 Relative Current Transfer Ratio vs. Ambient Temperature

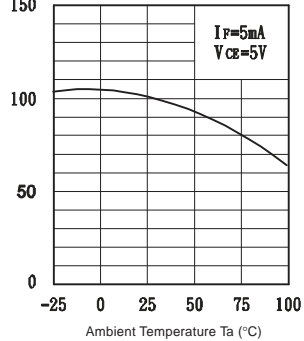


Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature

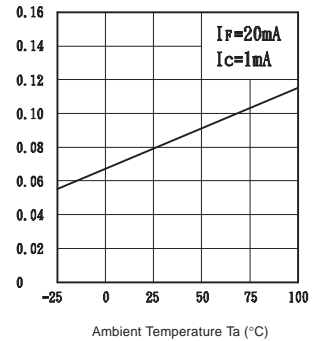


Fig.9 Collector-emitter Saturation Voltage vs. Forward Current

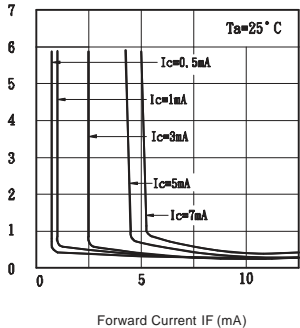


Fig.10 Response Time vs. Load Resistance

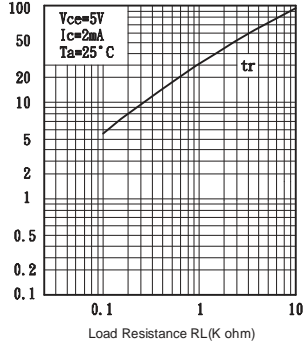


Fig.11 Response Time vs. Load Resistance

