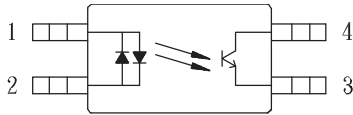


Schematic:



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

Features:

1. High isolation voltage (BV=2500 Vrms)
2. Small and thin package (4pin SOP, Pin pitch 1.27 mm)
3. High collector to emitter voltage (VCE=80V)
4. AC input response
5. High-speed switching (tr=3 μ S TYP., tf=5 μ S 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:

- PS2805-1
- TLP280

Absolute Maximum Ratings:

(Ta=25°C)

	Parameter	Symbol	Rating	Unit
Input	Forward current (DC)	IF	50	mA
	Power dissipation derating	Pd/°C	0.6	mW / °C
	Power dissipation	Pd	60	mW
	Peak forward current ⁻¹	IFP	1	A
Output	Collector-emitter voltage	VCEO	80	V
	Emitter-collector voltage	VECO	6	V
	Collector current	Ic	50	mA
	Power dissipation derating	Pc/°C	1.2	mW / °C
	Total power dissipation	Pd	120	mW
	Isolation voltage ⁻²	Viso	2500	Vrms
	Operating temperature	Topr	-30 to +100	°C
	Storage temperature	Tstg	-55 to +150	°C

+1 PW=100 μ s, duty cycle=1%

+2 AC voltage for 1 minute at TA=25°C, RH=60% between input and output

Electrical Characteristics:

(Ta=25°C)

	Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	VF	IF=UJ 5mA	—	1.1	1.4	V
	Terminal capacitance	Ct	V=0V, f=1.0MHz	—	60	—	pF
Output	Collector-emitter dark current	ICEO	VCE=80V, IF=0mA	—	—	100	nA
Transfer characteristics	Current transfer ratio (Ic / If)	CTR	IF=UJ 5mA, VCE=5V	80	—	600	%
	CTR ratio ⁻¹	CTR1/CTR2	IF=5mA, VCE=5V	0.3	1.0	3.0	—
	Collector saturation voltage	VCE (sat)	IF=UJ 10mA, Ic=2mA	—	—	0.3	V
	Isolation resistance	Ri-o	Vi-o=500VDC	5X10 ¹⁰	10 ¹¹	—	ohm
	Floating capacitance	Ci-o	V=0V, f=1.0MHz	—	0.4	—	pF
	Response time (Rise) ⁻²	tr	VCE=5V, Ic=2mA, RL=100ohm	—	3	—	μ S
	Response time (Fall) ⁻²	tf		—	5	—	μ S

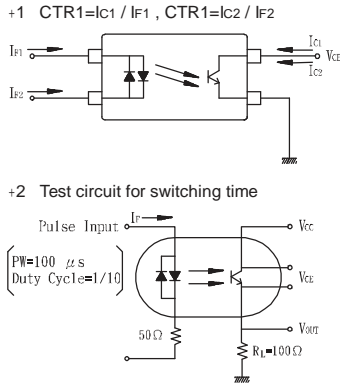


Fig.1 Current Transfer Ratio vs. Forward Current

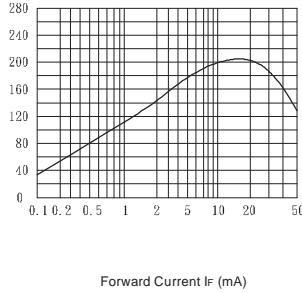


Fig.2 Collector Power Dissipation vs. Ambient Temperature

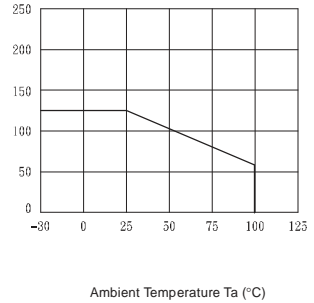


Fig.3 Collector Dark Current vs. Ambient Temperature

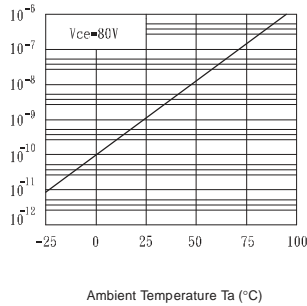


Fig.4 Forward Current vs. Ambient Temperature

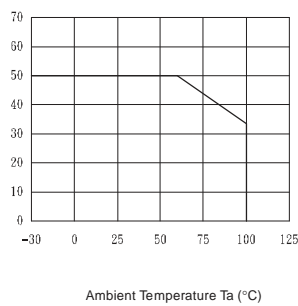


Fig.5 Forward Current vs. Forward Voltage

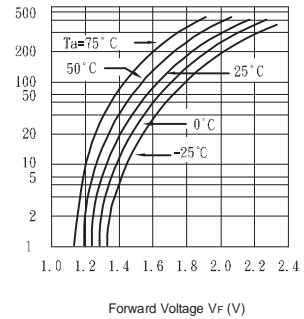


Fig.6 Collector Current vs. Collector-emitter Voltage

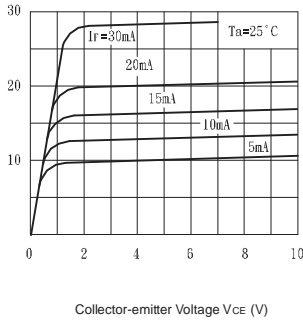


Fig.7 Collector-emitter Saturation Voltage vs. Ambient Temperature

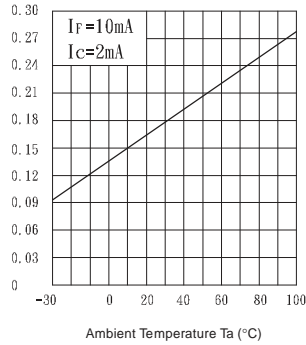


Fig.8 Collector-emitter Saturation Voltage vs. Forward Current

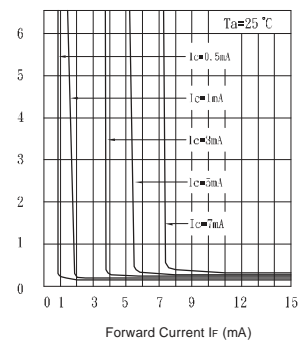


Fig.9 Response Time vs. Load Resistance

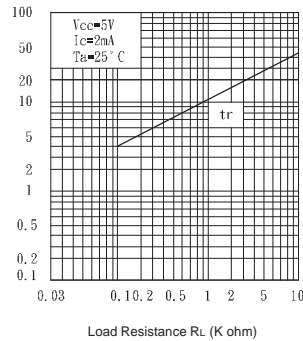


Fig.10 Response Time vs. Load Resistance

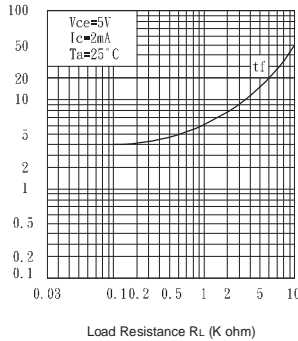


Fig.11 Relative Current Transfer Ratio vs. Ambient Temperature

