

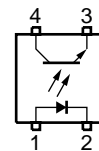
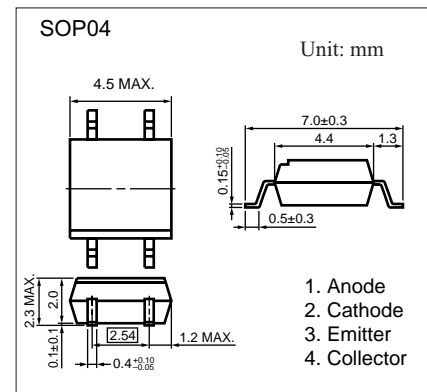
High Isolation Voltage Sop Photocoupler

PS2701A-1

Features

High isolation voltage

Ordering number of taping product



Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Diode	Forward Current (DC)	IF	30	mA
	Peak Forward Current *1	IFP	0.5	A
	Reverse Voltage	VR	6	V
	Power Dissipation	PD	80	mW
	Power Dissipation Derating	Pb/°C	0.8	mW/°C
Transistor	Collector-emitter voltage	VCEO	70	V
	Emitter-collector voltage	VECO	5	V
	Collector current	IC	30	mA
	Collector power dissipation	Pc	150	mW
	Power Dissipation Derating	Pc/°C	1.5	mW/°C
Isolation voltage *2		BV	3750	Vrms
Operating Ambient temperature		Topr	-55 to +100	°C
Storage temperature		Tstg	-55 to +150	°C

*1 Pulse width=100 μ s, Duty Cycle : 1%

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

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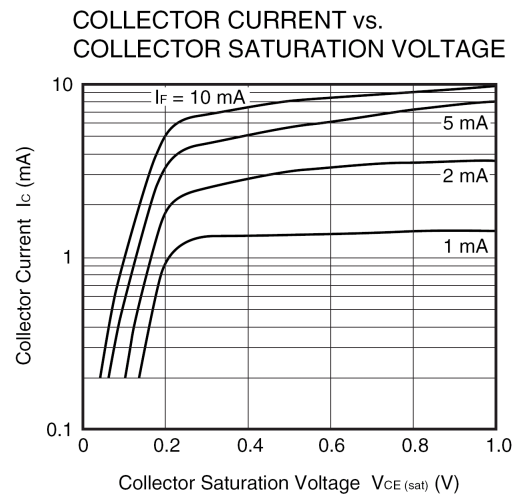
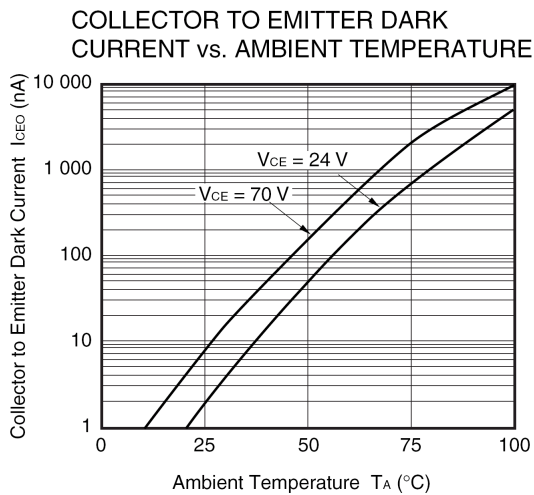
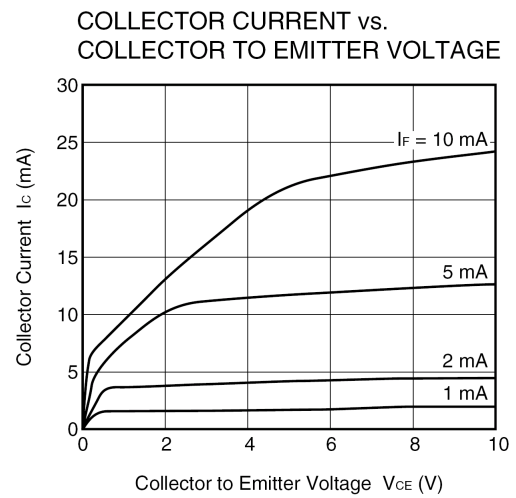
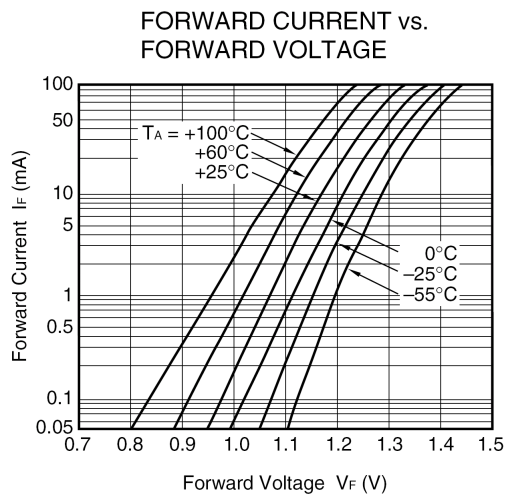
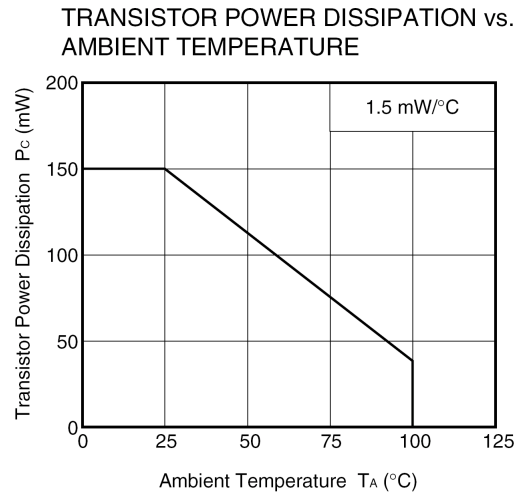
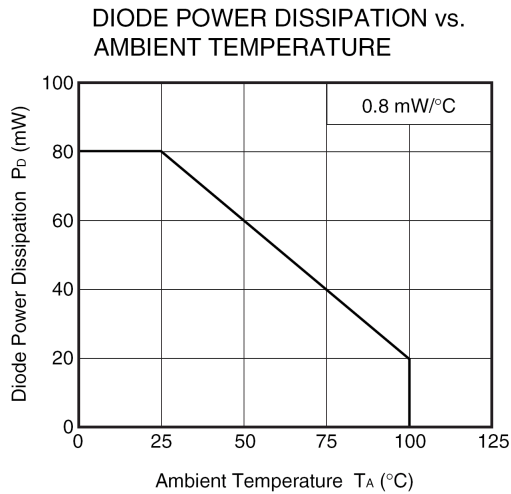
Electrical Characteristics Ta = 25°C

Parameter		Symbol	Test conditons	Min	Typ	Max	Unit
Diode	Forward voltage	V _F	I _F = 5mA		1.2	1.4	V
	Reverse current	I _R	V _R = 5V			5	μ A
	Terminal capacitance	C _t	V = 0, f = 1MHz		10		pF
Transistor	Collector to Emitter Dark Current	I _{CEO}	V _{CE} = 70V, I _F = 0 mA,			100	nA
Coupled	Current Transfer Ratio (I _c /I _F) *3	CTR	I _F = 5mA, V _{CE} = 5V	50		300	%
	Collector Saturation Voltage	V _{CE(sat)}	I _F = 10mA, I _c = 2mA		0.13	0.3	V
	Isolation Resistance	R _{I-O}	V _{I-O} = 1 kVdc	10 ¹¹			Ω
	Isolation Capacitance	C _{I-O}	V = 0, f = 1MHz		0.4		pF
	Rise time	t _r	V _{CE} = 5V, I _c = 2mA, R _L = 100 Ω		5		μ s
	Fall time	t _f			7		μ s

* 3 CTR rank :N: 50 to 300 (%), P: 150 to 300 (%), L: 100 to 300 (%), M: 50 to 150 (%)

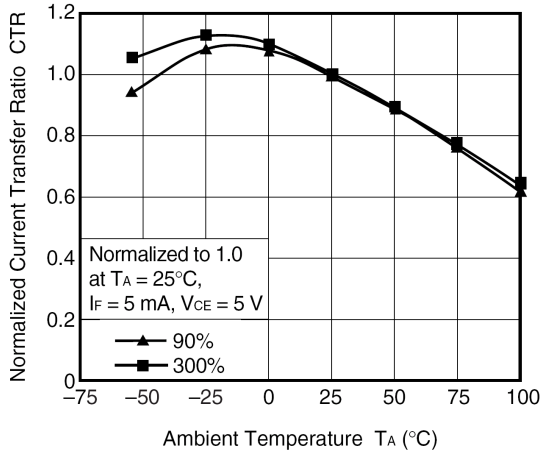
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Typical Characteristics

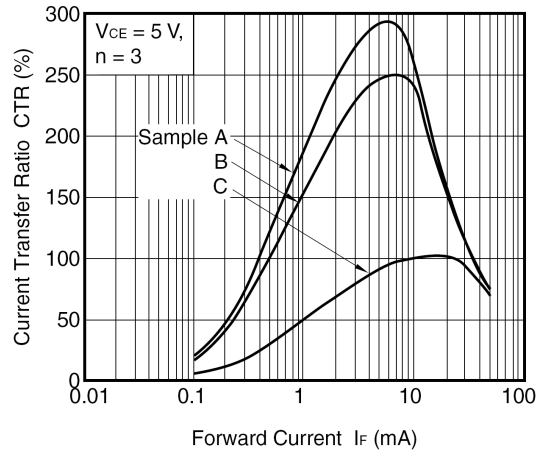


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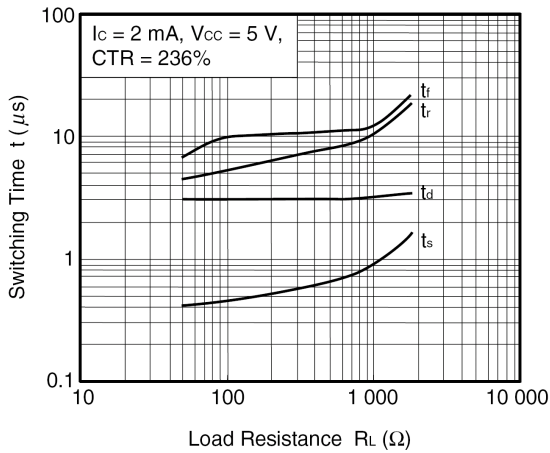
NORMALIZED CURRENT TRANSFER RATIO vs. AMBIENT TEMPERATURE



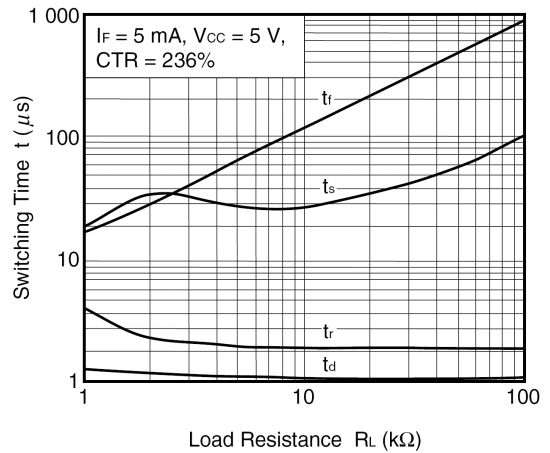
CURRENT TRANSFER RATIO vs. FORWARD CURRENT



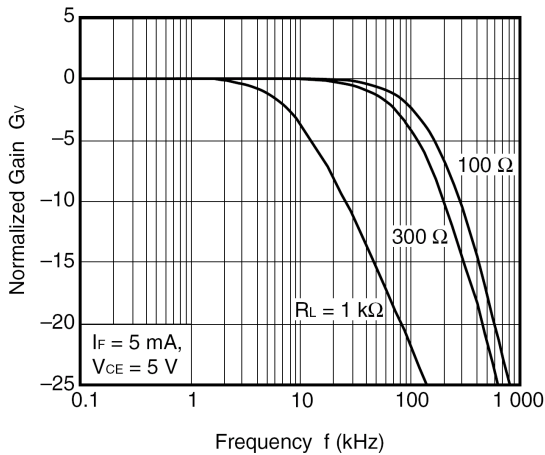
SWITCHING TIME vs. LOAD RESISTANCE



SWITCHING TIME vs. LOAD RESISTANCE



FREQUENCY RESPONSE



LONG TERM CTR DEGRADATION

