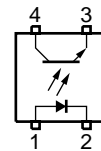
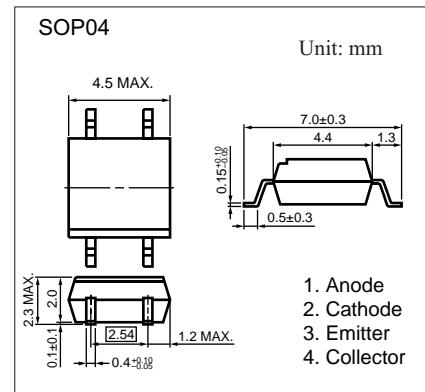


High Isolation Voltage High Collector To Emitter Voltage Type Sop Multi Photocoupler

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Features

- High isolation voltage
- High collector to emitter voltage
- High-speed switching



Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Diode	Forward Current (DC)	I _F	50	mA
	Peak Forward Current *1	I _{FP}	1	A
	Reverse Voltage	V _R	6	V
	Power Dissipation	P _D	80	mW
	Power Dissipation Derating	P _D /°C	0.8	mW/°C
Transistor	Collector-emitter voltage	V _{CEO}	120	V
	Emitter-collector voltage	V _{ECO}	6	V
	Collector current	I _C	30	mA
	Collector power dissipation	P _C	150	mW
	Power Dissipation Derating	P _C /°C	1.5	mW/°C
Isolation voltage *2		BV	3750	V _{rms}
Operating Ambient temperature		T _{opr}	-55 to +100	°C
Storage temperature		T _{stg}	-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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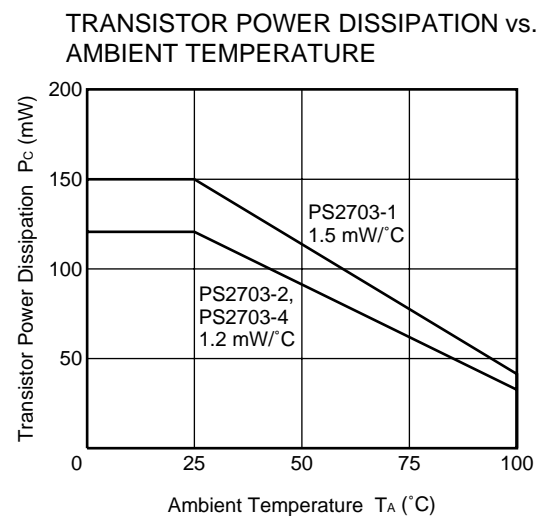
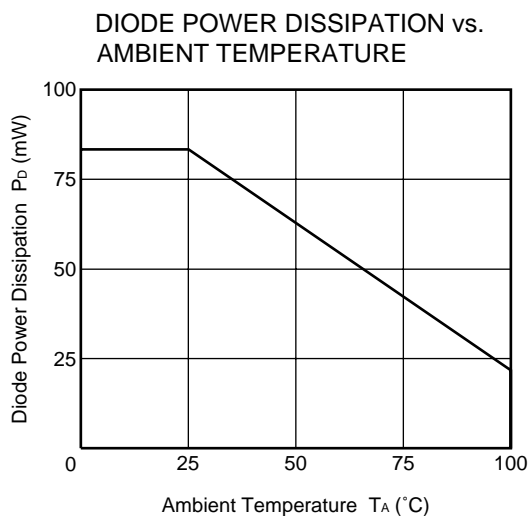
Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter		Symbol	Testconditions	Min	Typ	Max	Unit
Diode	Forward voltage	V_F	$I_F = 5\text{mA}$		1.1	1.4	V
	Reverse current	I_R	$V_R = 5\text{V}$			5	μA
	Terminal capacitance	C_t	$V = 0, f = 1\text{MHz}$		30		pF
Transistor	Collector to Emitter Current	I_{CEO}	$V_{CE} = 120\text{V}, I_F = 0\text{mA}$,			100	nA
Coupled	Current Transfer Ratio (I_c/I_F)	CTR	$I_F = 5\text{mA}, V_{CE} = 5\text{V}$	50		400	%
			$I_F = 1\text{mA}, V_{CE} = 5\text{V}$	10	80		
	Collector Saturation Voltage	$V_{CE(sat)}$	$I_F = 10\text{mA}, I_c = 2\text{mA}$			0.3	V
	Isolation Resistance	R_{I-O}	$V_{I-O} = 1\text{kVDC}$	10^{11}			Ω
	Isolation Capacitance	C_{I-O}	$V = 0, f = 1\text{MHz}$		0.4		pF
	Rise time	t_r	$V_{CE} = 5\text{V}, I_c = 2\text{mA}, R_L = 1\text{k}\Omega$		10		μs
	Fall time	t_f			10		μs

CTR rank

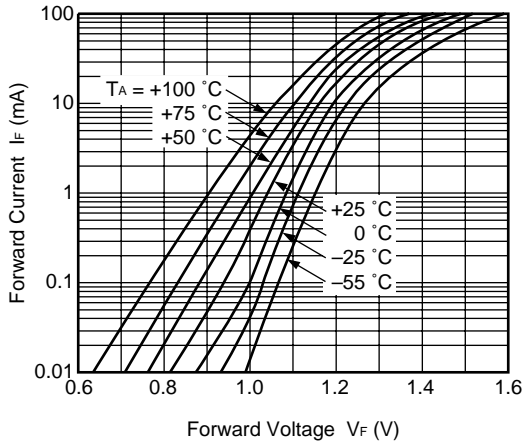
CTR rank	CTR (%)	Conditions
K	200 to 400	$I_F = 5\text{mA}, V_{CE} = 5\text{V}$
	80 to	$I_F = 1\text{mA}, V_{CE} = 5\text{V}$
L	100 to 300	$I_F = 5\text{mA}, V_{CE} = 5\text{V}$
	25 to	$I_F = 1\text{mA}, V_{CE} = 5\text{V}$
M	50 to 150	$I_F = 5\text{mA}, V_{CE} = 5\text{V}$
	10 to	$I_F = 1\text{mA}, V_{CE} = 5\text{V}$

Typical Characteristics

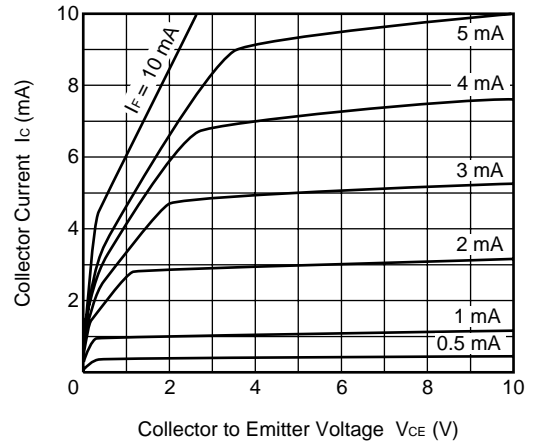


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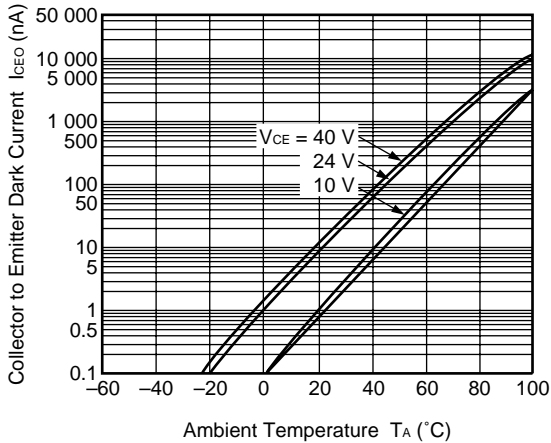
FORWARD CURRENT vs. FORWARD VOLTAGE



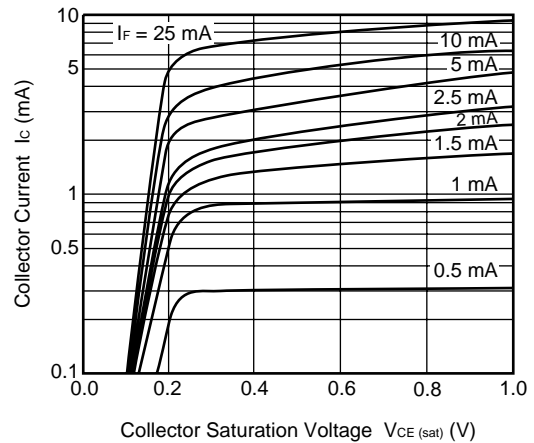
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



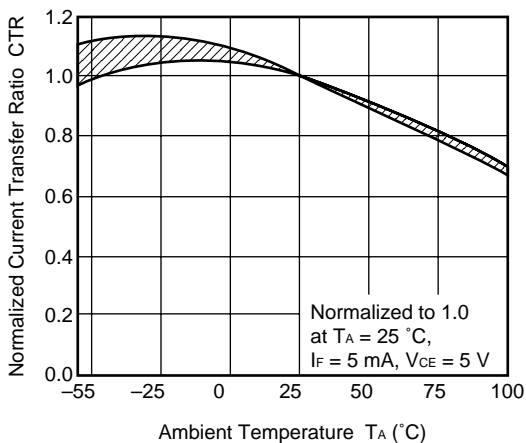
COLLECTOR TO EMITTER DARK CURRENT vs. AMBIENT TEMPERATURE



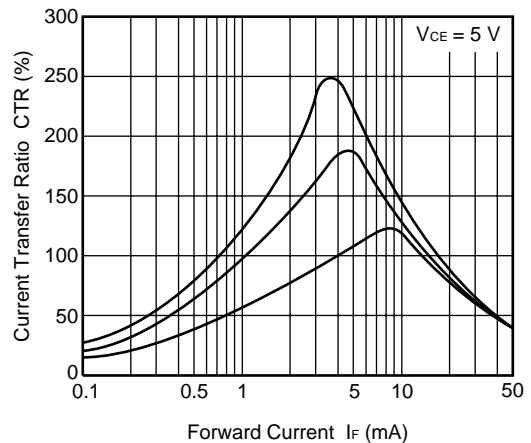
COLLECTOR CURRENT vs. COLLECTOR SATURATION VOLTAGE



NORMALIZED CURRENT TRANSFER RATIO vs. AMBIENT TEMPERATURE

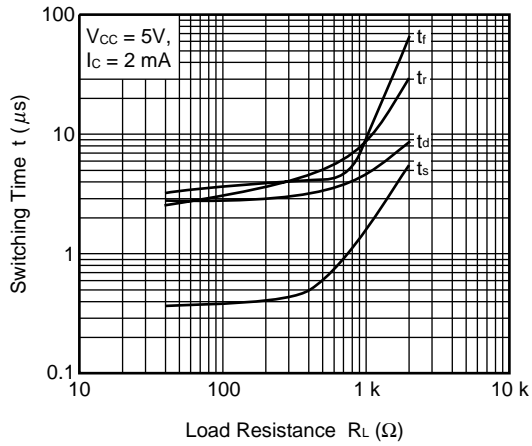


CURRENT TRANSFER RATIO vs. FORWARD CURRENT

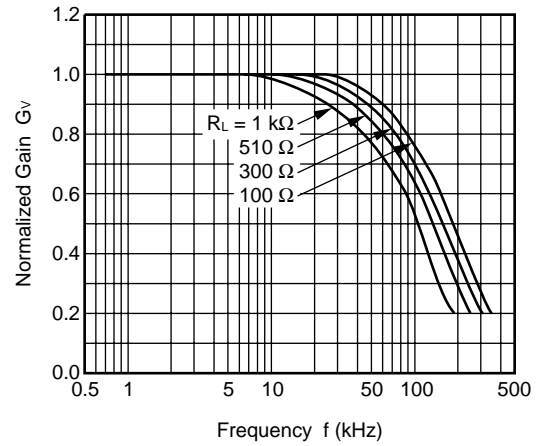


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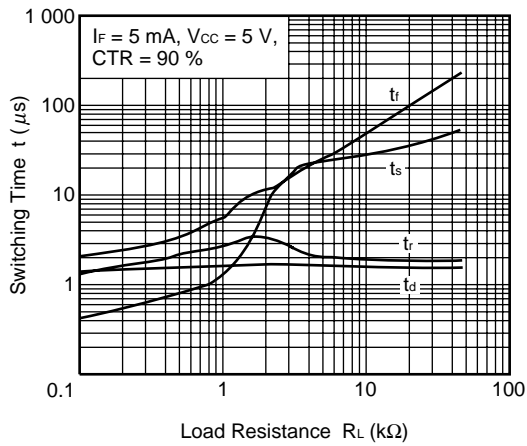
SWITCHING TIME vs. LOAD RESISTANCE



FREQUENCY RESPONSE



SWITCHING TIME vs. LOAD RESISTANCE



LONG TIME CTR DEGRADATION

