

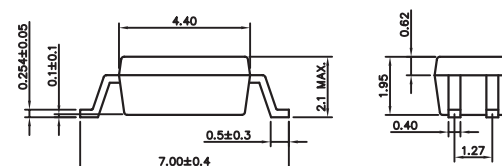
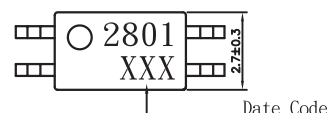
Features

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 ($V_{ceo} = 80 \text{ V}$)
4. High-speed switching ($t_r = 3 \text{ us TYP.}$, $t_f = 5 \text{ us TYP.}$)

Applications

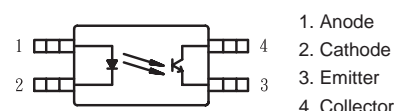
1. Programmable logic controllers
2. Measuring instruments
3. Power supply
4. Hybrid IC
5. Gaming machines

Outside Dimension:Unit (mm)



TOLERANCE : ± 0.2mm

Schematic:Top View



Absolute Maximum Ratings

(Ta=25°C)

Input	Parameter	Symbol	Rating	Unit
Input	Forward current (DC)	I_F	50	mA
	Reverse voltage	V_R	6	V
	Power dissipation derating	$P_D/^\circ\text{C}$	0.6	mW/°C
	Power dissipation	P_D	60	mW
	Peak forward current ^{*1}	I_{FP}	1	A
Output	Collector-emitter voltage	V_{CEO}	80	V
	Emitter-collector voltage	V_{ECO}	6	V
	Collector current	I_C	50	mA
	Power dissipation derating	P_C	1.2	mW/°C
	Total power dissipation	P_{tot}	120	mW
Isolation voltage ^{*2}		V_{iso}	2500	Vrms
Operating temperature		T_{opr}	-30 to +100	°C
Storage temperature		T_{stg}	-55 to +125	°C

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

*2 AC voltage for 1 minute at $T_A=25^\circ\text{C}$, RH=60% between input and output.

Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V_F	$I_F = 5\text{mA}$	—	1.1	1.4 V
	Reverse current	I_R	$V_R = 5\text{V}$	—	—	5 uA
	Terminal capacitance	C_t	$V = 0\text{V}$, $f = 1.0\text{kHz}$	—	30	pF
Output	Collector dark current	I_{CEO}	$V_{CE} = 80\text{V}$, $I_F = 0\text{mA}$	—	—	100 nA
Transfer characteristics	Current transfer ratio	CTR	$I_F = 5\text{mA}$, $V_{CE} = 5\text{V}$	80	—	600 %
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F = 10\text{mA}$, $I_C = 2\text{mA}$	—	—	0.3 V
	Isolation resistance	R_{i-o}	DC500V	5×10^{10}	10^{11}	ohm
	Floating capacitance	C_{i-o}	$V = 0\text{V}$, $f = 1.0\text{MHz}$	—	0.4	pF
	Response time(Rise)	t_r	$V_{CE} = 5\text{V}$, $I_C = 2\text{mA}$, $R_L = 100\text{ohm}$	—	3	us
	Response time(Fall)	t_f		—	5	us

*1 Test circuit for switching time.

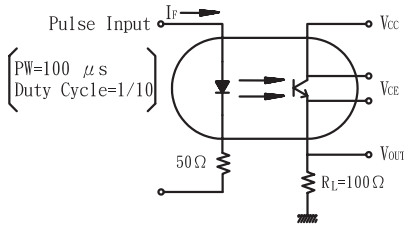


Fig.1 Current Transfer Ratio vs. Forward Current

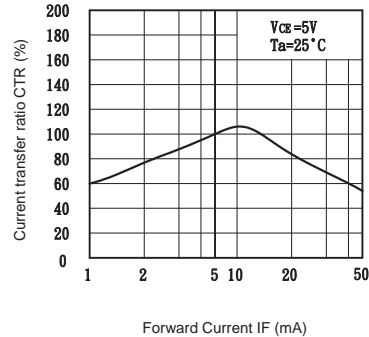


Fig.2 Collector Power Dissipation vs. Ambient Temperature

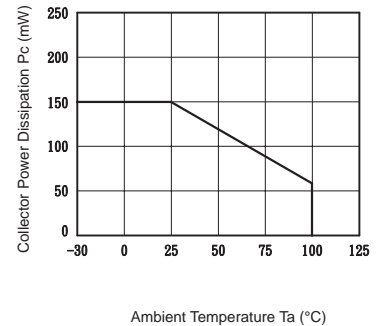


Fig.3 Collector Dark Current vs. Ambient Temperature

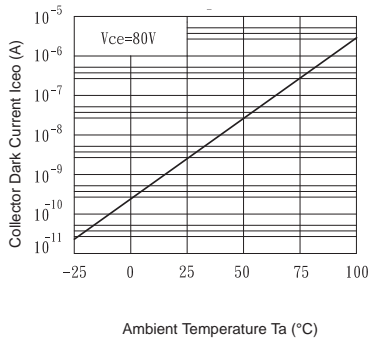


Fig.4 Forward Current vs. Ambient Temperature

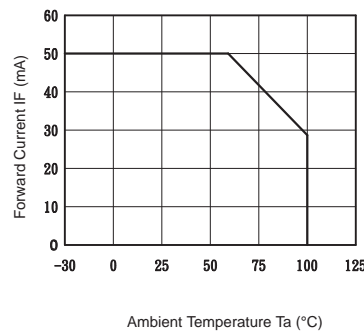


Fig.5 Forward Current vs. Forward Voltage

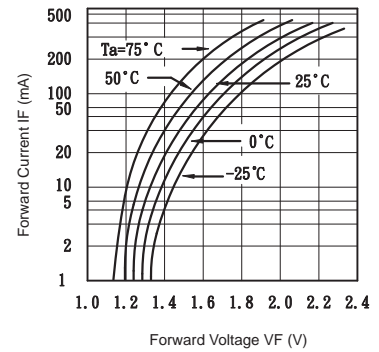


Fig.6 Collector Current vs. Collector-emitter Voltage

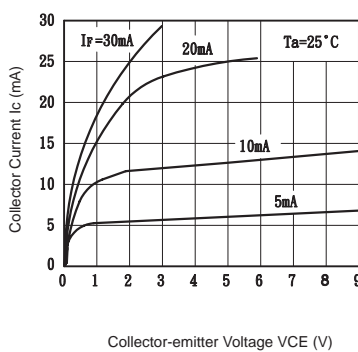


Fig.7 Relative Current Transfer Ratio vs. Ambient Temperature

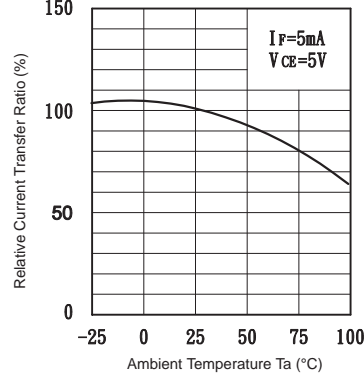


Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature

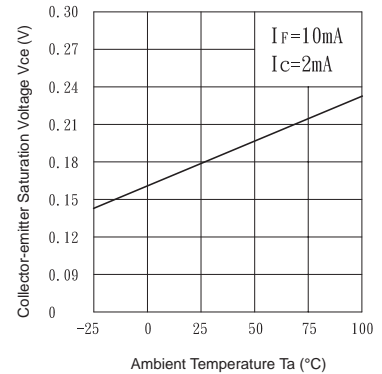


Fig.9 Collector-emitter Saturation Voltage vs. Forward Current

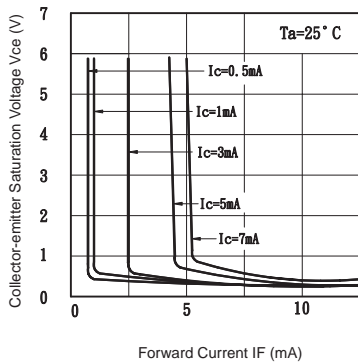


Fig.10 Response Time vs. Load Resistance

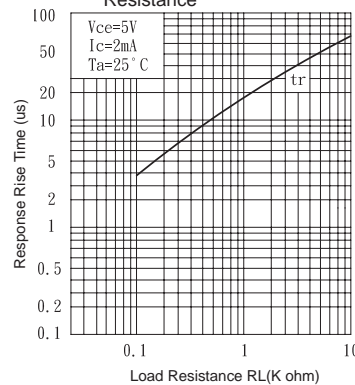


Fig.11 Response Time vs. Load Resistance

