

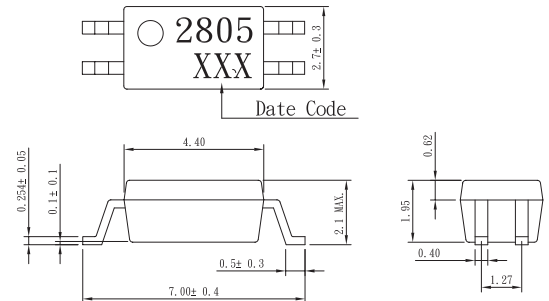
Features

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 (V_{CEO}=80V)
4. AC input response
5. High-speed switching (tr=3 μS TYP., tf=5 μS TYP.)

Applications

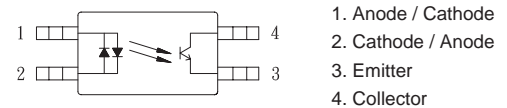
1. Programmable logic controllers
2. Measuring instruments
3. Hybrid IC

Outside Dimension:Unit (mm)



TOLERANCE : ± 0.2mm

Schematic:Top View



Absolute Maximum Ratings

(Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current (DC)	I _F	± 50	mA
	Power dissipation derating	P _D /°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 /°C	1.2	mW / °C
	Total power dissipation	P _C	120	mW
	Isolation voltage *2	V _{iso}	2500	Vrms
Operating temperature		T _{opr}	-30 to +100	°C
Storage temperature		T _{stg}	-55 to +150	°C

*1 PW=100 μs, duty cycle=1%

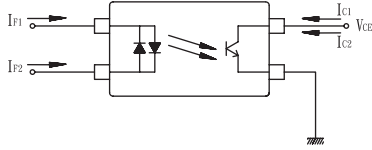
*2 AC voltage for 1 minute at T_A=25°C, RH=60% between input and output

Electro-optical Characteristics

(Ta=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V _F	I _F =± 5mA		1.1	1.4	V
	Terminal capacitance	C _t	V=0V, f=1.0MHZ		60		pF
Output	Collector-emitter dark current	I _{CEO}	V _{CE} =80V, I _F =0mA			100	nA
Transfer characteristics	Current transfer ratio (I _C / I _F)	CTR	I _F =± 5mA, V _{CE} =5V	80		600	%
	CTR ratio *1	CTR1/CTR2	I _F =5mA, V _{CE} =5V	0.3	1.0	3.0	
	Collector saturation voltage	V _{CE (sat)}	I _F =± 10mA, I _C =2mA	㊦		0.3	V
	Isolation resistance	R _{I-O}	V _{I-O} =500VDC	5X10 ¹⁰	10 ¹¹		ohm
	Floating capacitance	C _{I-O}	V=0V, f=1.0MHZ		0.4		pF
	Response time (Rise) *2	t _r	V _{CE} =5V, I _C =2mA, R _L =100ohm		3		μS
	Response time (Fall) *2	t _f			5		μS

*1 $CTR1=I_{c1} / I_{F1}$, $CTR1=I_{c2} / I_{F2}$



*2 Test circuit for switching time

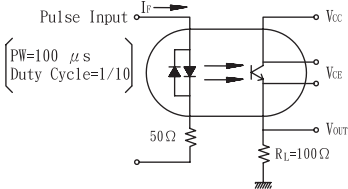


Fig.1 Current Transfer Ratio vs. Forward Current

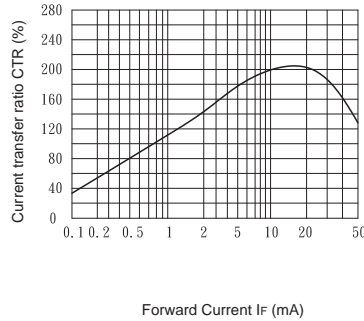


Fig.2 Collector Power Dissipation vs. Ambient Temperature

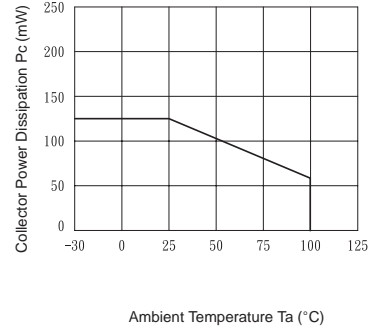


Fig.3 Collector Dark Current vs. Ambient Temperature

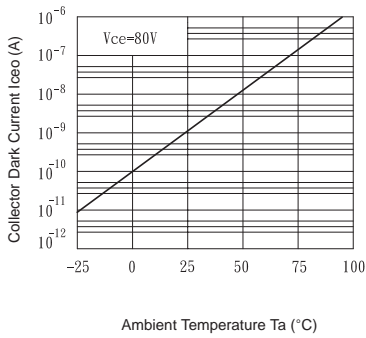


Fig.4 Forward Current vs. Ambient Temperature

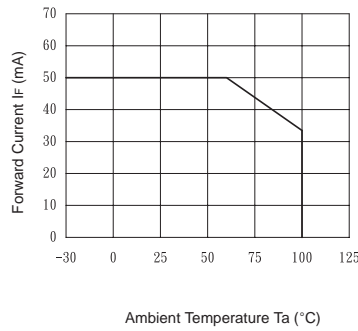


Fig.5 Forward Current vs. Forward Voltage

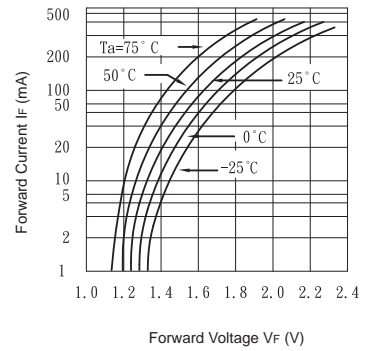


Fig.6 Collector Current vs. Collector-emitter Voltage

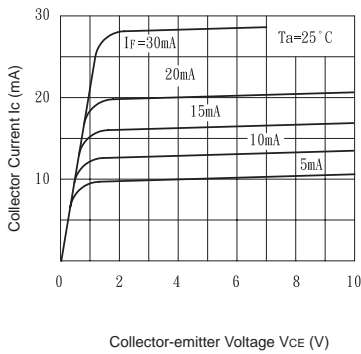


Fig.7 Collector-emitter Saturation Voltage vs. Ambient Temperature

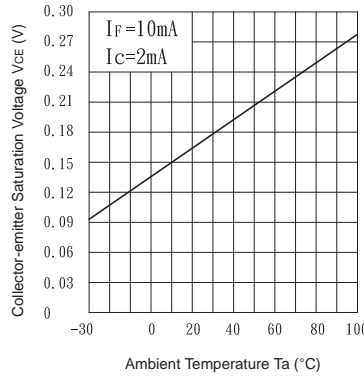


Fig.8 Collector-emitter Saturation Voltage vs. Forward Current

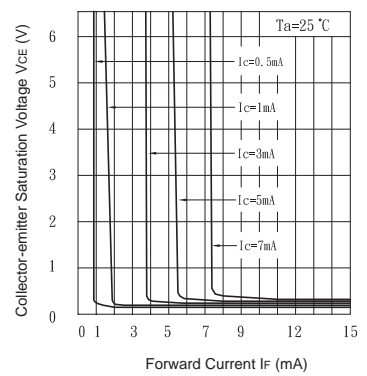


Fig.9 Response Time vs. Load Resistance

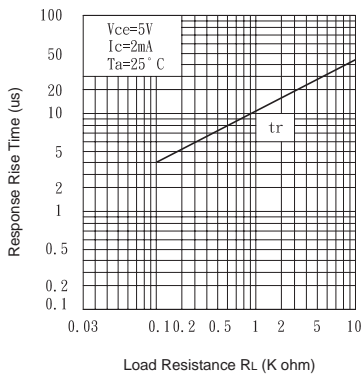


Fig.10 Response Time vs. Load Resistance

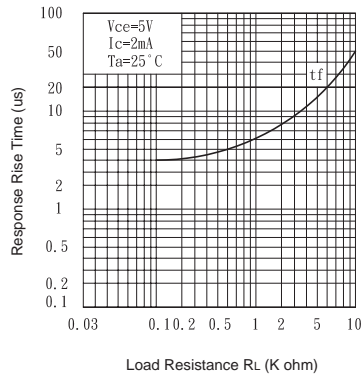


Fig.11 Relative Current Transfer Ratio vs. Ambient Temperature

