



Features

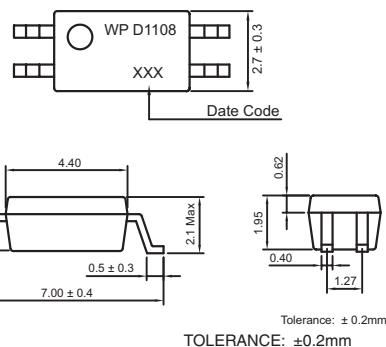
1. High isolation voltage ($BV = 2500 \text{ VRMS}$)
2. Small thin package (4-pin SSOP, Pin pitch 1.27mm)
3. High collector to emitter voltage ($V_{CEO} = 80\text{V}$)
4. AC input response.
5. High speed switching ($t_r = 3\mu\text{s typ.}, t_f = 5\mu\text{s typ.}$)
6. Available package types: SSOP(shown).

Applications

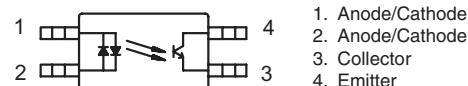
1. Programmable logic controllers.
2. Measuring instruments.
3. Hybrid IC.

Part Numbering System: Page 2. **Part Marking System:** Page 4.

Outside Dimension: Unit (mm)



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 _{ECD}	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 = 100μs, Duty Cycle = 1%

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

Electro-optical Characteristics

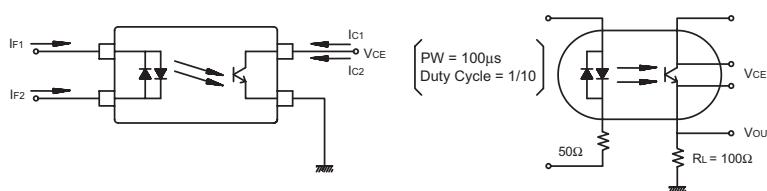
(Ta = 25°C)

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 = 0, 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	5 x 10 ¹⁰	10 ¹¹	-	ohm
	Floating capacitance	C _{i-o}	V = 0, f = 1, 0MHz	-	0.4	-	pF
	Response time (Rise)* ²	t _r	V _{ce} = 5V, I _C = 2mA, R _L = 100Ω	-	3	-	us
	Response time (Fall)* ²	t _f		-	5	-	us

*1 CTR1 = I_{C1} / I_{F1}, CTR2 = I_{C2} / I_{F2}

*2 Test circuit for switching time

Pulse Input I_F → V_{CC}





Data Curves

Fig.1 Current Transfer Ratio vs. Forward Current

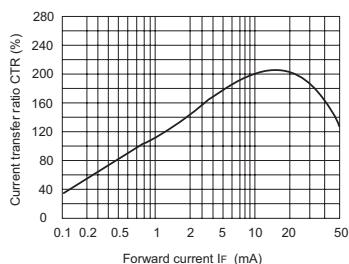


Fig.2 Collector Power Dissipation vs. Ambient Temperature

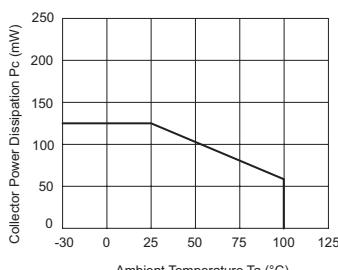


Fig.3 Collector Dark Current vs. Ambient Temperature

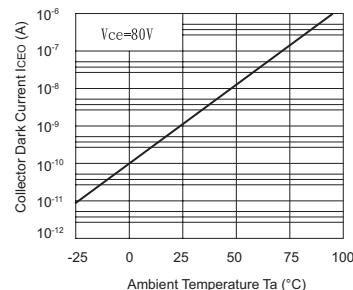


Fig.4 Forward Current vs. Ambient Temperature

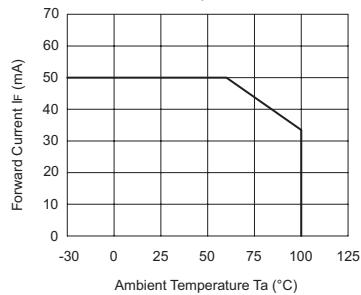


Fig.5 Forward Current vs. Forward Voltage

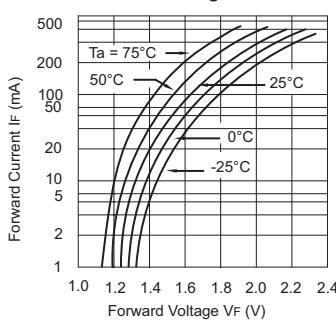


Fig.6 Collector Current vs. Collector-emitter Voltage

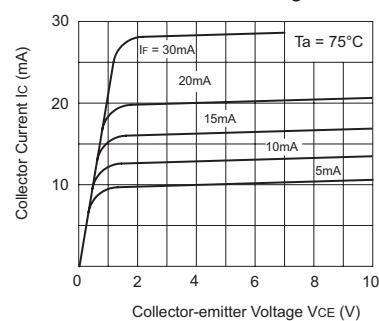


Fig.7 Collector-emitter Saturation Voltage vs. Ambient Temperature

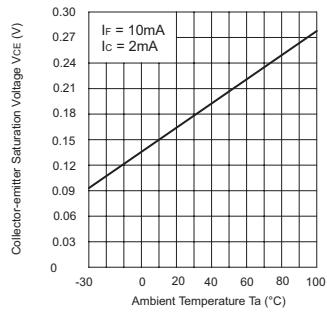


Fig.8 Collector-emitter Saturation Voltage vs. Forward Current

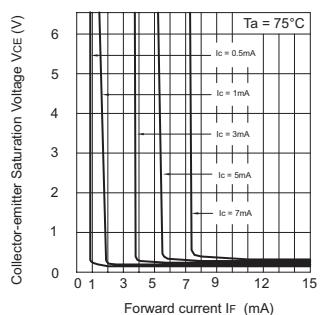


Fig.9 Response Time vs. Load Resistance

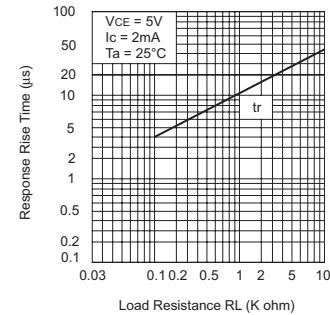


Fig.10 Response Time vs. Load Resistance

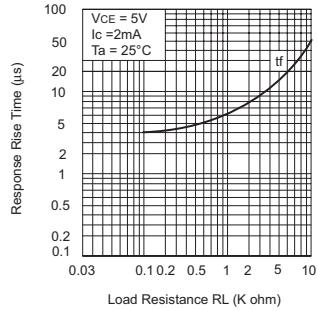


Fig.11 Relative Current Transfer Ratio vs. Ambient Temperature

