



Part Numbering System

WPPC - D 1 1 08 4 E SS - TRU
(1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) **Photo Coupler**

(2) **Input**

A: AC
D: DC

(3) **Channel**

1: 1 Channel
2: 2 Channels
4: 4 Channels

(4) **Output Configuration**

1: Single Photo Transistor
2: Darlington Photo Transistor
3: (6-pin only) Single Photo Transistor without base terminal

(5) **Output Type**

Collector Emitter Voltage

03: 30V(V_{CEO})
035: 35V(V_{CEO})
06: 60V(V_{CEO})
08: 80V(V_{CEO})
30: 300V(V_{CEO})

Propagation Delay Time

D008: 1M bit/s*
D015: 1M bit/s*
D35: High Gain Split PD*
D60: High Gain Split PD*

*Digital High Speed Parts: Code denotes max propagation delay.

(6) **Pin Configuration**

4: 4pin
6: 6pin
8: 8pin
16: 16pin

(7) **CTR Ranking**

Note: The below ranking pertains to WPPC-D11084 Series. No CTR Ranking for Digital High Speed Parts.

Rank	CTR(%)
A	80-600
B	130-260
C	200-400
D	300-600
E	80-600
F	200-300
G	150-300
H	100-200

(8) **Package Types**

D: DIP
A: SMD
S: SOP
SS: SSOP
H: Long Creepage Distance

(9) **Taping**

TLD: Tape Direction Left
TRU: Tape Direction Right

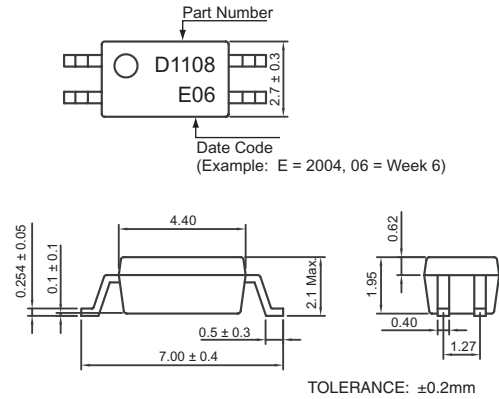
Features

1. High isolation voltage (BV = 2500 VRMS)
2. Small thin package (4-pin SSOP, Pin pitch 1.27mm)
3. High collector to emitter voltage (VCEO = 80V)
4. High speed switching (tr = 3us typ., tf = 5us typ.)
5. Available package types: SSOP(shown).

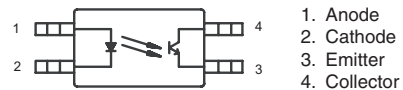
Applications

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

Outside Dimension: Unit (mm)



Schematic: Top View



Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	Rating	Unit
Input	Forward Current(DC)	IF	50	mA
	Reverse Voltage	VR	6	V
	Power Dissipation Derating	Pb/°C	0.6	mW/°C
	Power Dissipation	PD	60	mW
	Peak Forward Current*1	IFP	1	A
Output	Collector-Emitter Voltage	VCEO	80	V
	Emitter-Collector Voltage	VECO	6	V
	Collector Current	IC	50	mA
	Power Dissipation Derating	PC	1.2	mW/°C
	Total Power Dissipation	Ptot	120	mW
	Isolation Voltage*2	Viso	2500	Vrms
Operating Temperature		Topr	-30 to +100	°C
Storage Temperature		Tstg	-55 to +125	°C

*1 PW = 100us, 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	VF	IF = 5mA	-	1.1	1.4	V
	Reverse Current	IR	V = 5V	-	-	5	uA
	Terminal Capacitance	Ct	V = 0V, f = 1, 0kHz	-	30	-	pF
Output	Collector Dark Current	ICEO	VCE = 80V, IF = 0mA	-	-	100	nA
	Current Transfer Ratio	CTR	IF = 5mA, VCE = 5V	80	-	600	%
Transfer Characteristics	Collector-Emitter Saturation Voltage	VCE(sat)	IF = 10mA, IC = 2mA	-	-	0.3	V
	Isolation Resistance	RI-o	DC500V	5 x 10 ¹⁰	10 ¹¹	-	ohm
	Floating Capacitance	CI-o	V = 0V, f = 1.0MHz	-	0.4	-	pF
	Response Time (Rise)	tr	VCE = 5V, IC = 2mA, RL = 100Ω	-	3	-	us
	Response Time (Fall)	tf		-	5	-	us

Data Curves

*1 Test circuit for switching time.

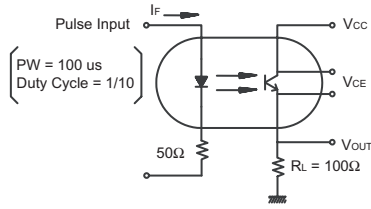


Fig. 1 Current Transfer Ratio vs. Forward Current

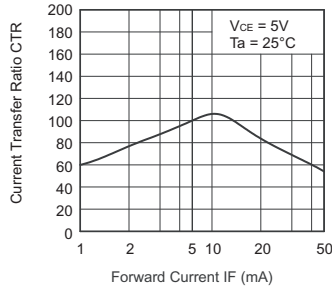


Fig. 2 Collector Power Dissipation vs. Ambient Temperature

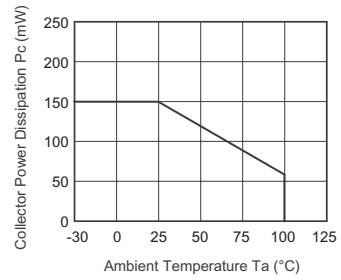


Fig. 3 Collector Dark Current vs. Ambient Temperature

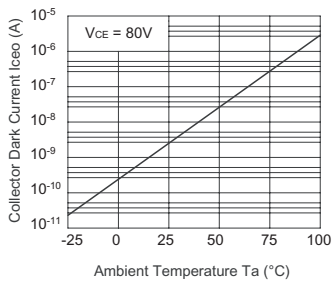


Fig. 4 Forward Current vs. Ambient Temperature

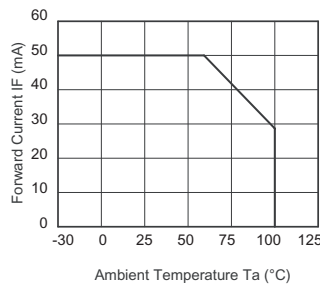


Fig. 5 Forward Current vs. Forward Voltage

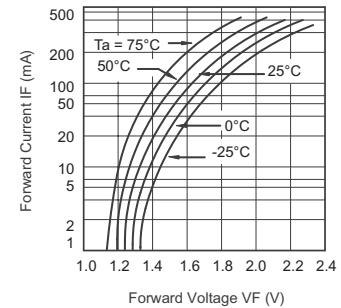


Fig. 6 Collector Current vs. Collector-Emitter Voltage

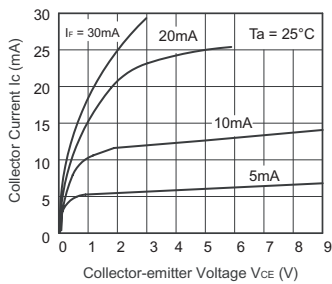


Fig. 7 Relative Current Transfer Ratio vs. Ambient Temperature

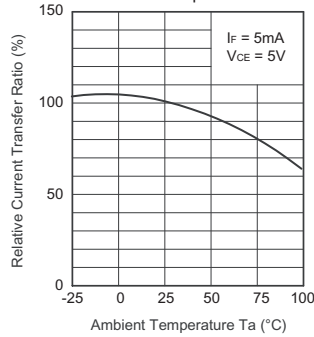


Fig. 8 Collector-emitter Saturation Voltage vs. Ambient Temperature

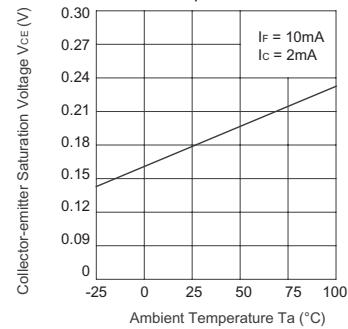


Fig. 9 Collector-Emitter Saturation Voltage vs. Forward Current

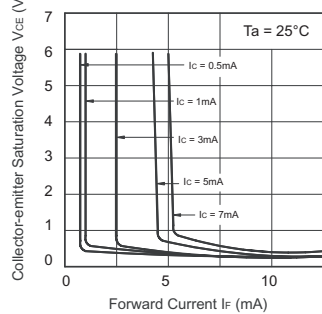


Fig. 10 Response Time vs. Load Resistance

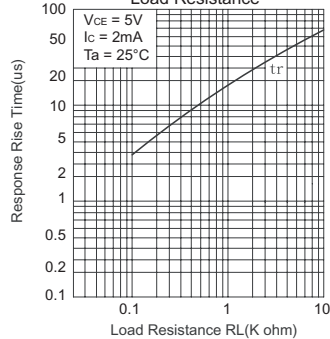


Fig. 11 Response Time vs. Load Resistance

