USR/CNR Listed (File# E223387)

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

ISOCOUPLER™
WPPC-D11084 Series

High Isolation Voltage
DC Input Response
SSOP Photo Coupler

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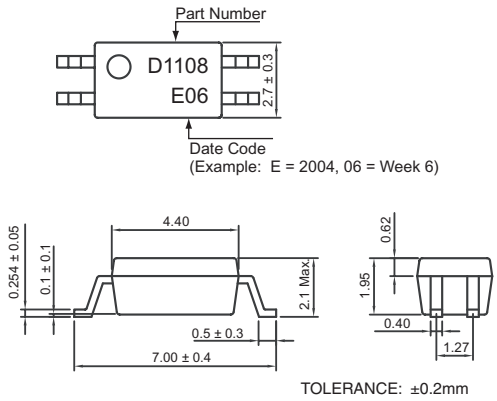
Features

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

Applications

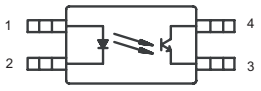
1. Programmable logic controllers.
2. Measuring intstruments.
3. Power supply.
4. Hybrid IC.
5. Gaming machines.

Outside Dimension: Unit (mm)



TOLERANCE: ±0.2mm

Schematic: Top View



1. Anode
2. Cathode
3. Emitter
4. Collector

Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	Rating	Unit
Input	Forward Current(DC)	I_F	50	mA
	Reverse Voltage	V_R	6	V
	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	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 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
	Reverse Current	I_R	V = 5V	-	-	5	uA
	Terminal Capacitance	C_t	V = 0V, f = 1, 0kHz	-	30	-	pF
Output	Collector Dark Current	I_{CEO}	V_{CE} = 80V, I_F = 0mA	-	-	100	nA
Transfer Characteristics	Current Transfer Ratio	CTR	I_F = 5mA, V_{CE} = 5V	80	-	600	%
	Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_F = 10mA, I_C = 2mA	-	-	0.3	V
	Isolation Resistance	R_{I-O}	DC500V	5 x 10^{10}	10^{11}	-	ohm
	Floating Capacitance	C_{I-O}	V = 0V, f = 1.0MHz	-	0.4	-	pF
	Response Time (Rise)	tr	V_{CE} = 5V, I_C = 2mA, R_L = 100Ω	-	3	-	us
	Response Time (Fall)	tf		-	5	-	us

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Data Curves

*1 Test circuit for switching time.

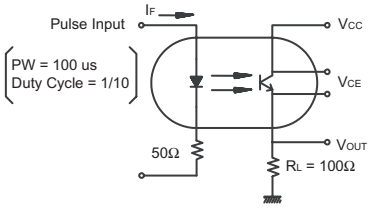

Fig. 1 Current Tranfer Ratio vs. Forward Current

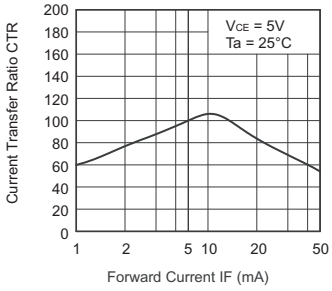

Fig. 2 Collector Power Dissipation vs. Ambient Temperature

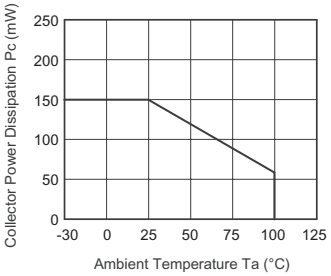

Fig. 3 Collector Dark Current vs. Ambient Temperature

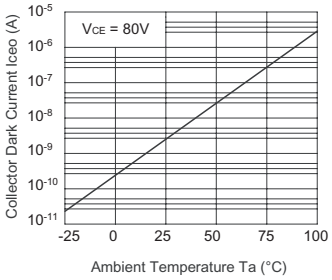

Fig. 4 Forward Current vs. Ambient Temperature

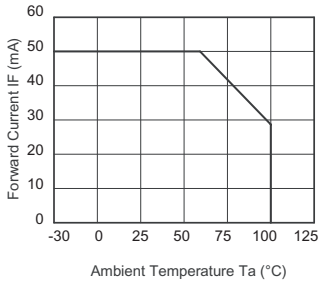

Fig. 5 Forward Current vs. Forward Voltage

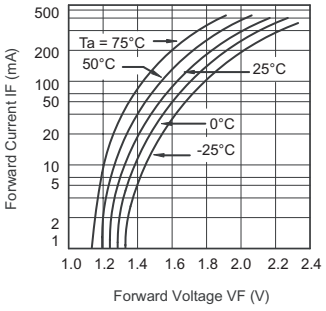

Fig. 6 Collector Current vs. Collector-Emitter Voltage

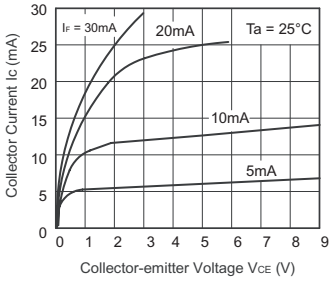

Fig. 7 Relative Current Transfer Ratio vs. Ambient Temperature

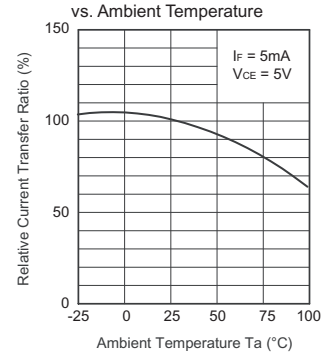

Fig. 8 Collector-emitter Saturation Voltage vs. Ambient Temperature

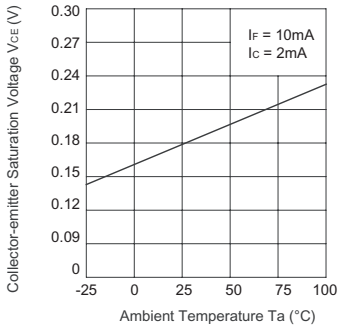

Fig. 9 Collector-Emitter Saturation Voltage vs. Forward Voltage

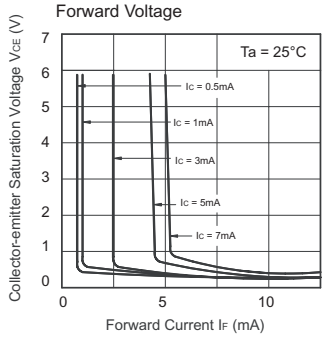

Fig. 10 Response Time vs. Load Resistance

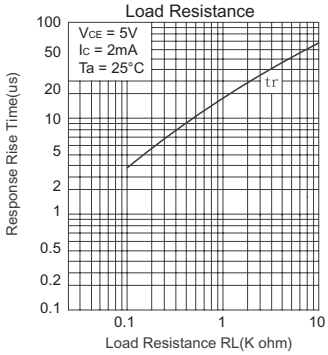

Fig. 11 Response Time vs. Load Resistance