SHARP
PC4SD11series
PC4SD21series

Under development	
New product	●

Phototriac Coupler

V_{DRM}:800V Phototriac Coupler for Triggering

■ Features

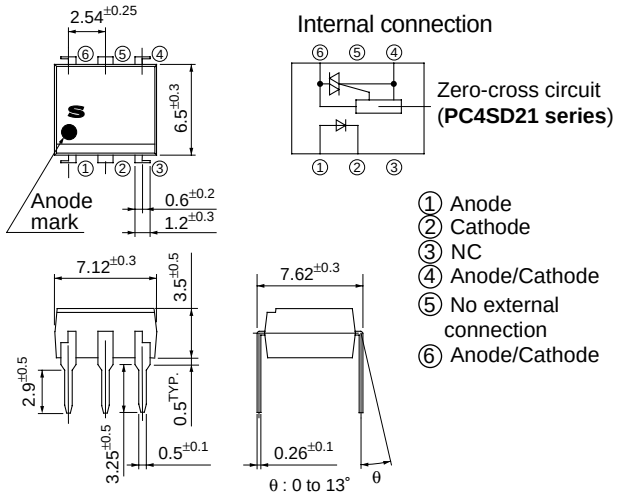
(1) Repetitive peak OFF-state voltage(V_{DRM}):800V
(2) Low zero-cross voltage ($V_{OX[MAX]}$=20 V)
(3) Line up for each trigger current
(4) Recognized by UL, file No. E64380
(5) Approved by CSA file No. CA95323
(6) Approved by VDE0884 file No127413 (as an option)

■ Applications

(1) Home appliances
(2) OA equipment, FA equipment
(3) SSRs

■ Outline Dimensions

(Unit:mm)



■ Model Line-up

	for AC 200V line
No zero-cross circuit	**PC4SD11NTZB** ($I_{FT[MAX]}$= 7 mA)
	PC4SD11NTZC ($I_{FT[MAX]}$= 5 mA)
Built-in zero-cross circuit	**PC4SD21NTZC** ($I_{FT[MAX]}$= 5 mA)
	PC4SD21NTZD ($I_{FT[MAX]}$= 3 mA)

■ Absolute Maximum Ratings

(Ta=25˚C)

Parameter		Symbol	Ratings	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
Output	RMS ON-state current	$I_{T(rms)}$	100	mA
	*1 Peak one cycle surge current	I_{surge}	1.2	A
	Repetitive peak OFF-state voltage	V_{DRM}	800	V
	*2 Isolation voltage	$V_{iso(rms)}$	5.0	kV
	Operating temperature	T_{opr}	–30 to +100	˚C
Storage temperature		T_{stg}	–40 to +125	˚C
*3 Soldering temperature		T_{sol}	260	˚C

*1: 50Hz sine wave
*2: AC for 1 minute, RH=40 to 60%, f=60Hz
*3: For 10s

■ Electro-optical Characteristics

(Ta=25˚C)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		V_F	I_F=20 mA	-	1.2	1.4	V
	Reverse current		I_R	V_R=3 V	-	-	10	μA
Output	Repetitive peak OFF-state current		I_{DRM}	V_D=V_{DRM}	-	-	3	μA
	ON-state voltage		V_T	I_T=100 mA	-	-	2.5	V
	Holding current		I_H	V_D=6 V (Built-in zero-cross circuit type:V_D=4 V)	0.1	-	3.5	mA
	Critical rate of rise of OFF-state voltage	**PC4SD11NTZB PC4SD11NTZC**	dV/dt	V_D=1/√2 • V_{DRM}	50	-	-	V/μs
		PC4SD21NTZC PC4SD21NTZD			500	1000	-	
	Zero-cross voltage	**PC4SD21NTZC PC4SD21NTZD**	V_{OX}	Resistance load, I_F=8 mA	-	-	20	V
Transfer characteristics	Minimum trigger current	**PC4SD11NTZB**	I_{FT}	V_D=6 V (Built-in zero-cross circuit type : V_D=4 V), R_L=100 Ω	-	-	7	mA
		PC4SD11NTZC PC4SD21NTZC			-	-	5	
		PC4SD21NTZD			-	-	3	
	Isolation resistance		R_{ISO}	DC500 V, 40 to 60%RH	5×10^{10}	1×10^{11}	-	Ω
	Turn-on time	**PC4SD11NTZB PC4SD11NTZC**	t_{on}	V_D=6 V, R_L=100 Ω, I_F=20 mA	-	-	100	μs
		PC4SD21NTZC PC4SD21NTZD		V_D=4 V, R_L=100 Ω, I_F=20 mA	-	-	50	

As of September 2001

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  (i) The devices in this publication are designed for use in general electronic equipment designs such as:
  --- Personal computers
  --- Office automation equipment
  --- Telecommunication equipment [terminal]
  --- Test and measurement equipment
  --- Industrial control
  --- Audio visual equipment
  --- Consumer electronics

  (ii) Measures such as fail-safe function and redundant design should be taken to ensure reliability and safety when SHARP devices are used for or in connection with equipment that requires higher reliability such as:
  --- Transportation control and safety equipment (i.e., aircraft, trains, automobiles, etc.)
  --- Traffic signals
  --- Gas leakage sensor breakers
  --- Alarm equipment
  --- Various safety devices, etc.

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  --- Telecommunication equipment [trunk lines]
  --- Nuclear power control equipment
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