

PC4SD11NTZ Series

$V_{DRM}:800V$ Phototriac Coupler for Triggering

■ Features

1. High repetitive peak OFF-state voltage (V_{DRM}):800V
2. Isolation voltage between input and output ($V_{iso (rms)}$):5kV
3. Recognized by UL, file No. E64380 (model No.4SD11)
4. Approved by CSA, file No. CA95323 (model No.4SD11)
5. Approved by VDE(VDE0884), file No.127413 (available as an option)

■ Applications

1. Home appliances
2. OA equipment, FA equipment
3. SSRs

■ Model Line-up

Minimum trigger current ($I_{FT(MAX)}$)	Model No.
7mA	PC4SD11NTZB *(PC4SD11YTZB)
5mA	PC4SD11NTZC *(PC4SD11YTZC)

*VDE(VDE0884) approved type

■ Absolute Maximum Ratings ($T_a=25^{\circ}C$)

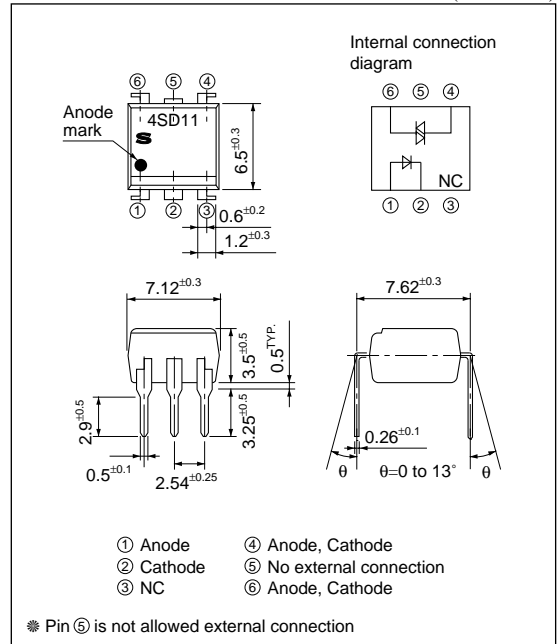
	Parameter	Symbol	Rating	Unit
Input	*1 Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
Output	*1 RMS ON-state current	$I_{T (rms)}$	0.1	A
	Peak one cycle surge current	I_{surge}	1.2 (50Hz sine wave)	A
	Repetitive peak OFF-state voltage	V_{DRM}	800	V
	*2 Isolation voltage	$V_{iso (rms)}$	5	kV
	Operating temperature	T_{opr}	-30 to +100	$^{\circ}C$
	Storage temperature	T_{stg}	-55 to +125	$^{\circ}C$
	Soldering temperature	T_{sol}	260 (For 10s)	$^{\circ}C$

*1 The derating factors of absolute maximum ratings due to ambient temperature are shown in Fig.1, 2

*2 40 to 60%RH, AC for 1minute, $f=60Hz$

■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

($T_a=25^\circ\text{C}$)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V_F	$I_F=20\text{mA}$	—	1.2	1.4	V
	Reverse current	I_R	$V_R=3\text{V}$	—	—	10^{-5}	A
Output	Repetitive peak OFF-state current	I_{DRM}	$V_D=V_{\text{DRM}}$	—	—	3×10^{-6}	A
	ON-state voltage	V_T	$I_T=0.1\text{A}$	—	—	2.5	V
	Holding current	I_H	$V_D=6\text{V}$	0.1	—	3.5	mA
	Critical rate of rise of OFF-state voltage	dV/dt	$V_D=1/\sqrt{2} \cdot V_{\text{DRM}}$	50	—	—	V/ μs
Transfer characteristics	Minimum trigger current	PC4SD11NTZB	$V_D=6\text{V}, R_L=100\Omega$	—	—	7	mA
		PC4SD11NTZC		—	—	5	
	Isolation resistance	R_{ISO}	DC=500V, 40 to 60%RH	5×10^{10}	10^{11}	—	Ω
	Turn-on time	t_{on}	$V_D=6\text{V}, R_L=100\Omega, I_F=20\text{mA}$	—	—	100	μs

Fig.1 RMS ON-state Current vs. Ambient Temperature

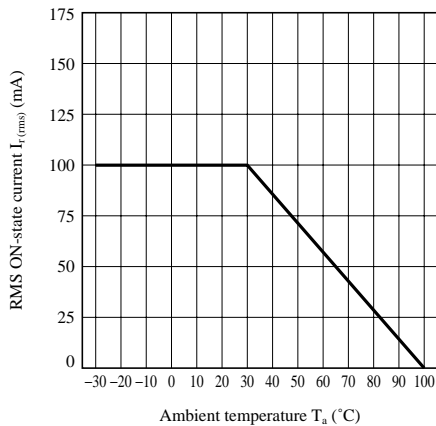


Fig.2 Forward Current vs. Ambient Temperature

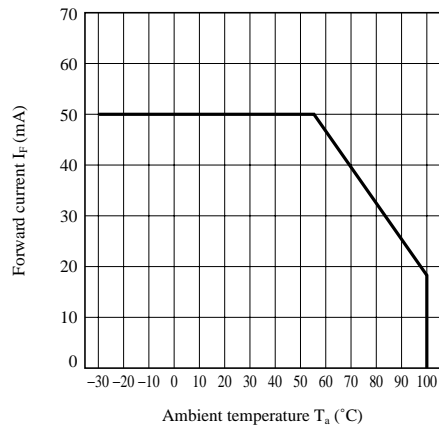


Fig.3 Forward Current vs. Forward Voltage

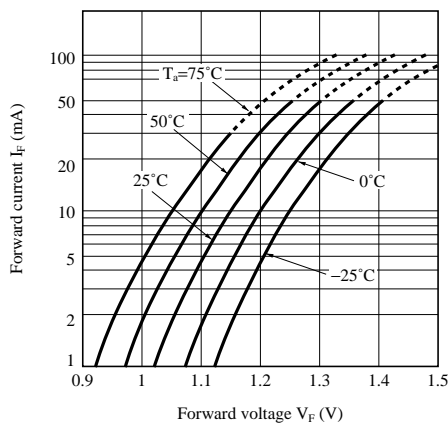


Fig.4 Minimum Trigger Current vs. Ambient Temperature

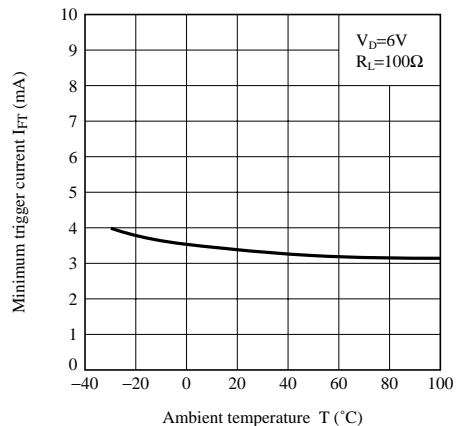


Fig.5 ON-state Voltage vs. Ambient Temperature

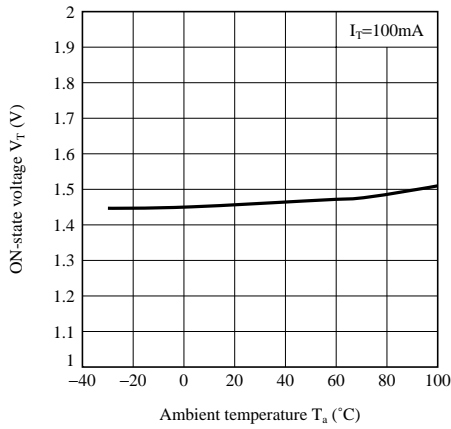


Fig.6 Holding Current vs. Ambient Temperature

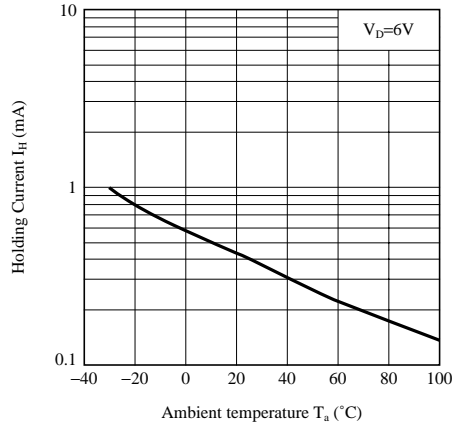


Fig.7 Repetitive Peak OFF-state Current vs. Ambient Temperature

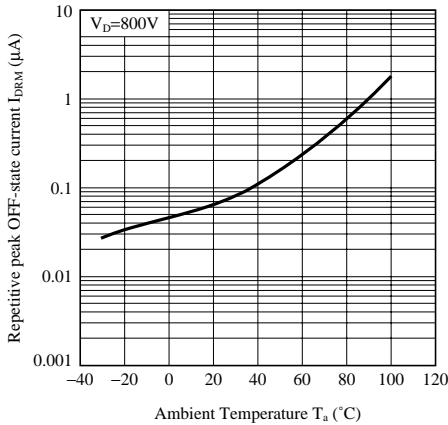


Fig.8 Relative Repetitive Peak OFF-state Voltage vs. Ambient Temperature

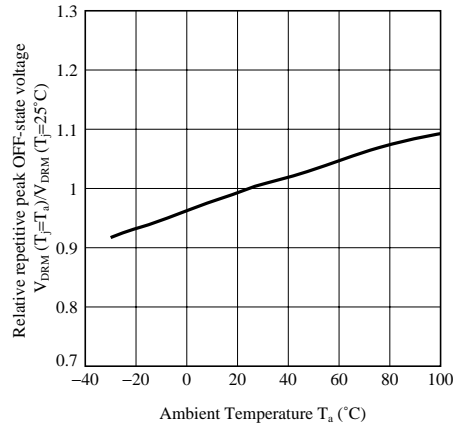
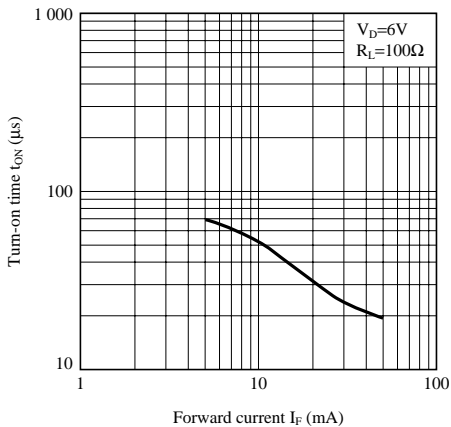


Fig.9 Turn-on Time vs. Forward Current



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