

PC3SD11NTZB PC3SD11NTZC

■ Features

1. Isolation voltage between input and output ($V_{iso(rms)}$): 5kV
2. High critical rate of rise of OFF-state voltage
(dV/dt : MIN. 1 000V/ μ s)
3. Recognized by UL, file No. E64380
4. Approved by VDE0884, file No.127413 (available as an option)

※ PC3SD11NTZB, PC3SD11NTZC are for 200V line

■ Applications

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

■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Input	*1 Forward current	I_F	50
	Reverse voltage	V_R	6
Output	*1 RMS ON-state current	$I_T(rms)$	0.1
	Peak one cycle surge current	I_{surge}	1.2 (50Hz sine wave)
	Repetitive peak OFF-state voltage	V_{DRM}	600
	*2 Isolation voltage	$V_{iso(rms)}$	5
Operating temperature		T_{opr}	-30 to +100 °C
Storage temperature		T_{stg}	-55 to +125 °C
Soldering temperature		T_{sol}	260 (For 10s) °C

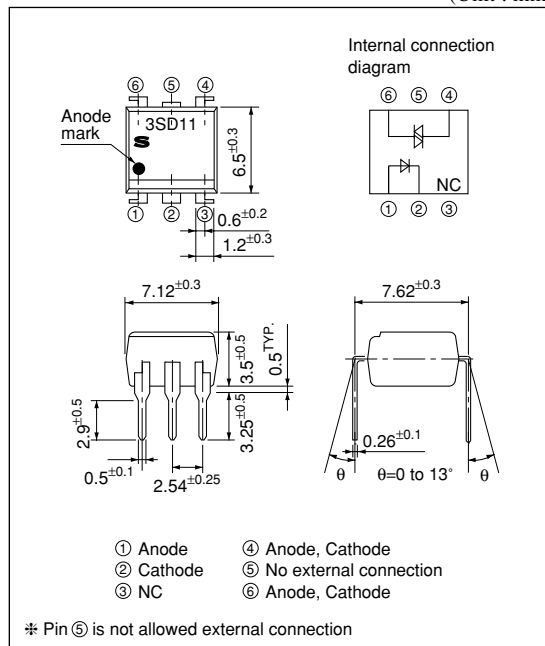
*1 The derating factors of absolute maximum ratings due to ambient temperature are shown in Fig.1, 2

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

Phototriac Coupler for Triggering

■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

(Ta=25°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}	$V_D=V_{DRM}$	—	—	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	$V_D=1/\sqrt{2} \cdot V_{DRM}$	1 000	2 000	—	V/ μs
Transfer characteristics	Minimum trigger current	I_{FT}	$V_D=6\text{V}, R_L=100\Omega$	—	—	7	mA
				—	—	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

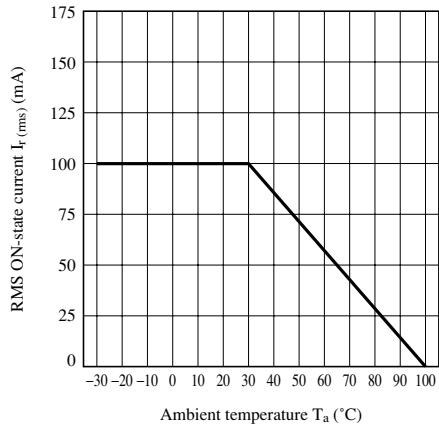


Fig.2 Forward Current vs. Ambient Temperature

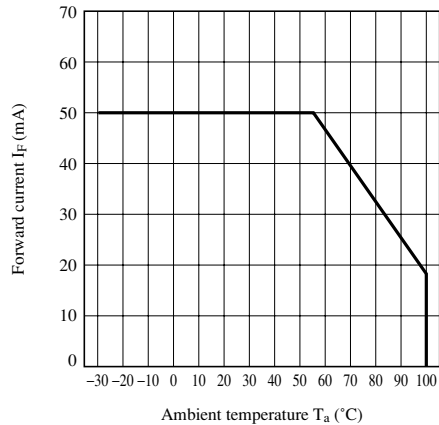


Fig.3 Forward Current vs. Forward Voltage

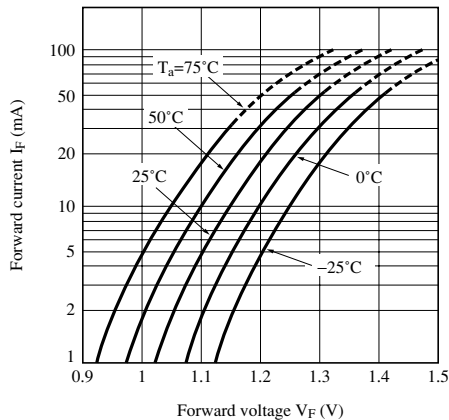


Fig.4 Minimum Trigger Current vs. Ambient Temperature

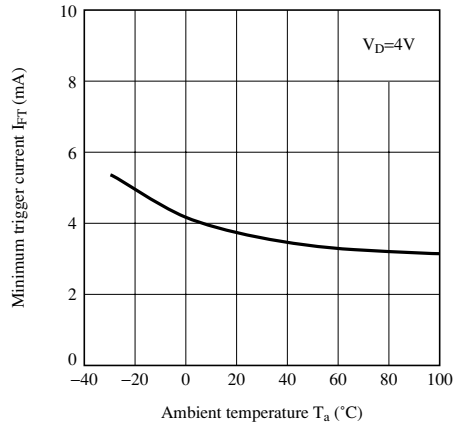
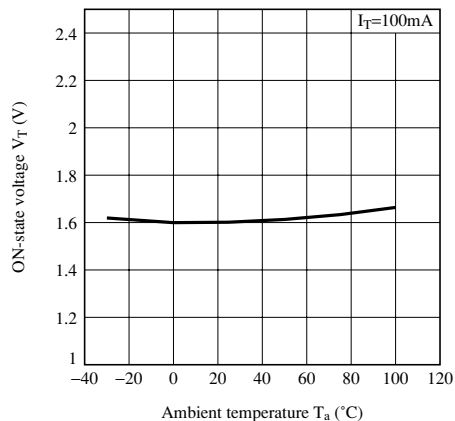
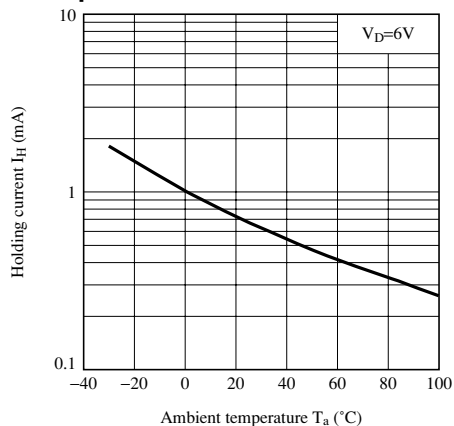
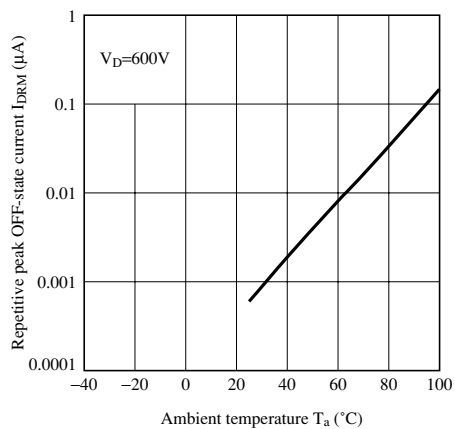
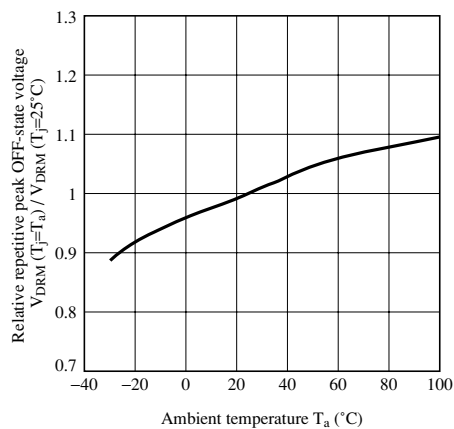
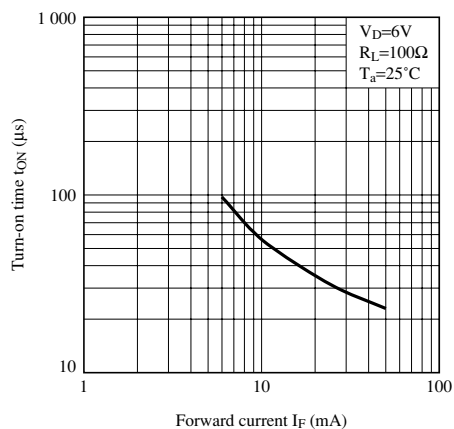


Fig.5 ON-state Voltage vs. Ambient Temperature**Fig.6 Holding Current vs. Ambient Temperature****Fig.7 Repetitive Peak OFF-state Current vs. Ambient Temperature****Fig.8 Relative Repetitive Peak OFF-state Voltage vs. Ambient Temperature****Fig.9 Turn-on Time vs. Forward Current**

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