

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	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}	600	V
	*2 Isolation voltage	$V_{iso(rms)}$	5	kV
	Operating temperature	T_{opr}	-30 to +100	°C
	Storage temperature	T_{stg}	-55 to +125	°C
	Soldering temperature	T_{sol}	260 (For 10s)	°C

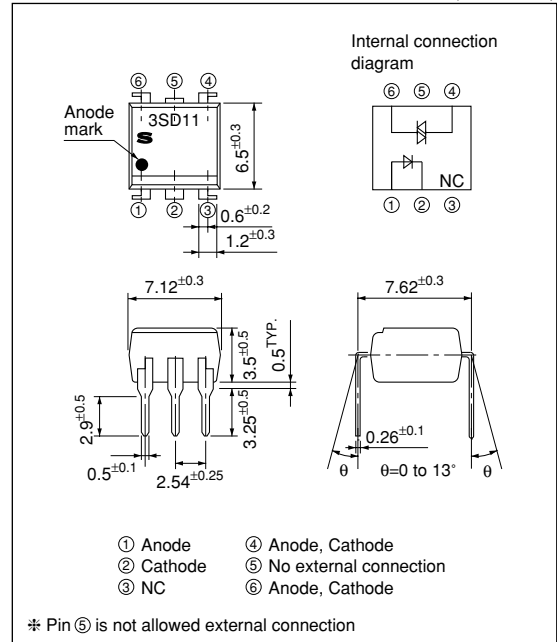
*1 The derating factors of absolute maximum ratings due to ambient temperature are shown in Fig.1, 2

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

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 =20mA	—	1.2	1.4	V
	Reverse current	I _R	V _R =3V	—	—	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 =0.1A	—	—	2.5	V
	Holding current	I _H	V _D =6V	0.1	—	3.5	mA
	Critical rate of rise of OFF-state voltage	dV/dt	V _D =1/√2 • V _{DRM}	1 000	2 000	—	V/μs
Transfer characteristics	Minimum trigger current	PC3SD11NTZB	V _D =6V, R _L =100Ω	—	—	7	mA
		PC3SD11NTZC		—	—	5	
	Isolation resistance	R _{ISO}	DC=500V, 40 to 60%RH	5×10 ¹⁰	10 ¹¹	—	Ω
	Turn-on time	t _{on}	V _D =6V, R _L =100Ω, I _F =20mA	—	—	100	μs

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

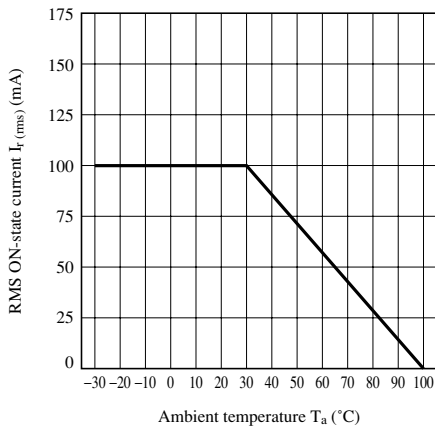


Fig.2 Forward Current vs. Ambient Temperature

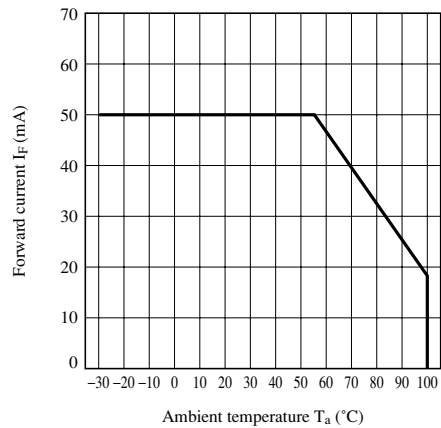


Fig.3 Forward Current vs. Forward Voltage

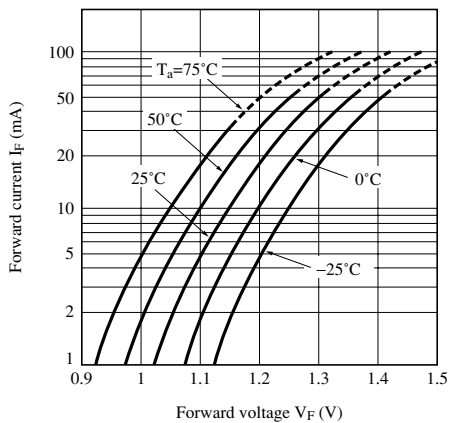


Fig.4 Minimum Trigger Current vs. Ambient Temperature

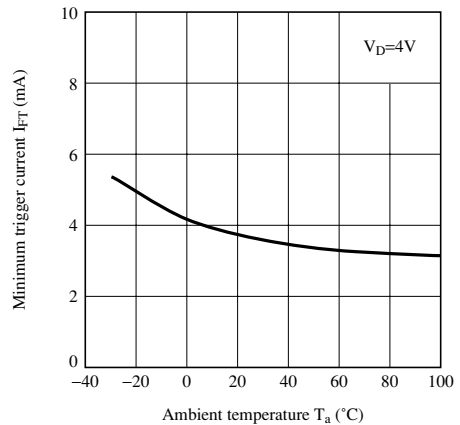


Fig.5 ON-state Voltage vs. Ambient Temperature

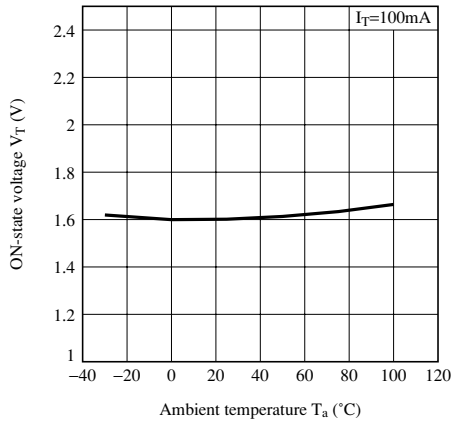


Fig.6 Holding Current vs. Ambient Temperature

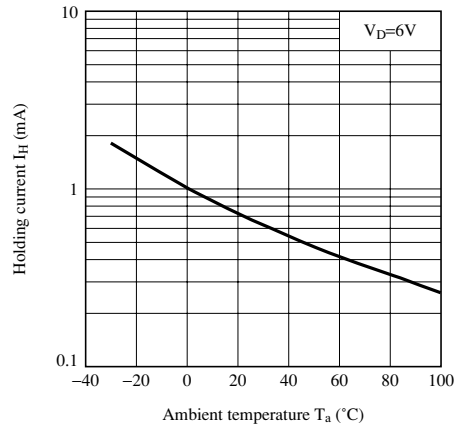


Fig.7 Repetitive Peak OFF-state Current vs. Ambient Temperature

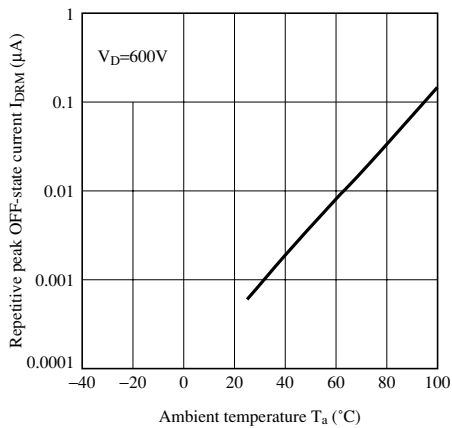


Fig.8 Relative Repetitive Peak OFF-state Voltage vs. Ambient Temperature

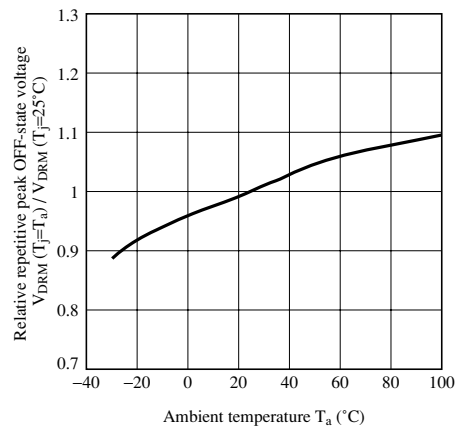
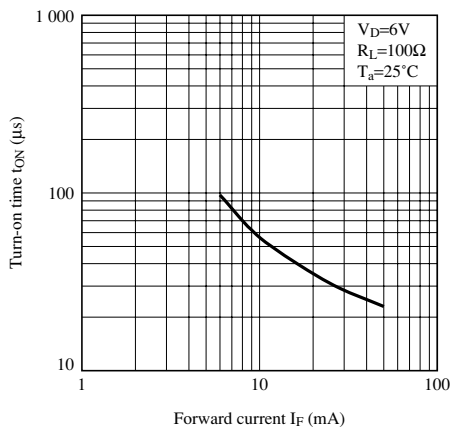


Fig.9 Turn-on Time vs. Forward Current



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