

SHARP

PC3SF11YVZA/PC3SF11YVZB

PC3SF11YVZA/ PC3SF11YVZB

■ 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. Internal isolation distance (0.4mm or more)
4. Recognized by UL (File No. E64380)
Approved by VDE (VDE0884, File No.127413)
Approved by BSI (BS415, File No.6690,
BS7002, File No.7421)
Approved by SEMKO (File No.0033029/01-04)
Approved by DEMKO (File No.310107-01)
Approved by FIMKO (File No.15795)

※ PC3SF11YVZA, PC3SF11YVZB are for 200V line

■ Applications

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

■ Model Line-up

Minimum trigger current ($I_{FT(MAX.)}$)	for AC 200V line
10mA	PC3SF11YVZA
7mA	PC3SF11YVZB

■ 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}	600	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)	$^{\circ}C$

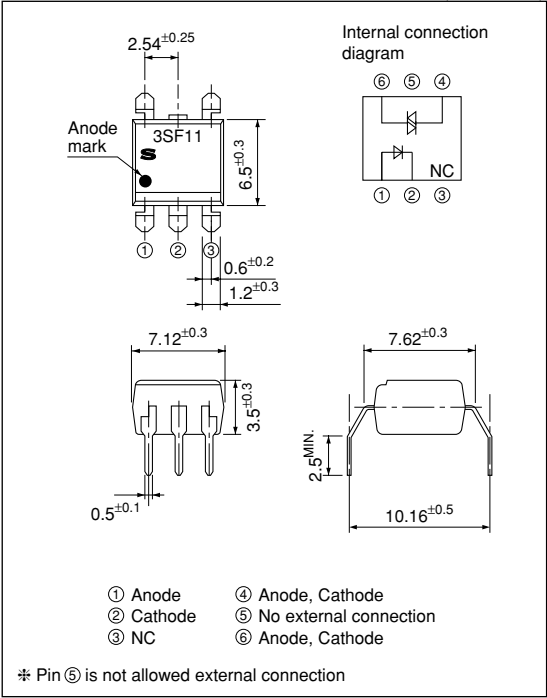
*1 The derating factors of absolute maximum ratings due to ambient temperature are shown in Fig.1, 2

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

Reinforced Insulation Type 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}	$V_D=6\text{V}, R_L=100\Omega$	—	—	10	mA
				—	—	7	
	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

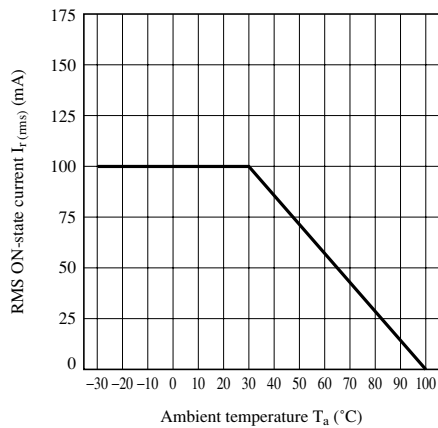


Fig.2 Forward Current vs. Ambient Temperature

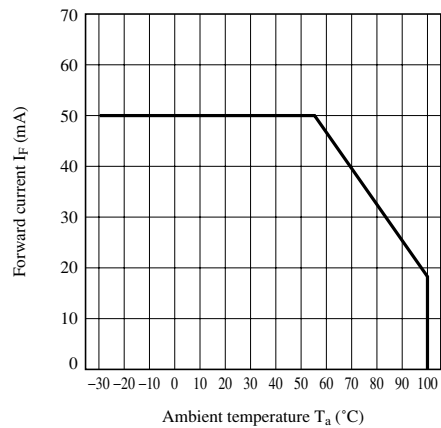


Fig.3 Forward Current vs. Forward Voltage

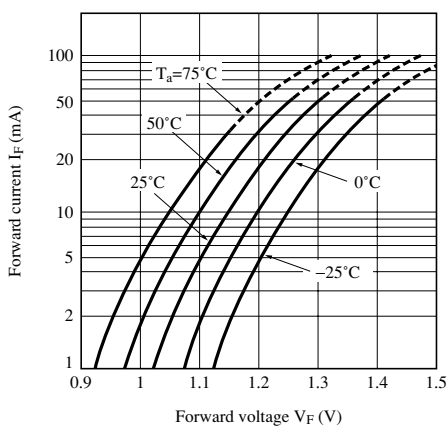


Fig.4 Minimum Trigger Current vs. Ambient Temperature

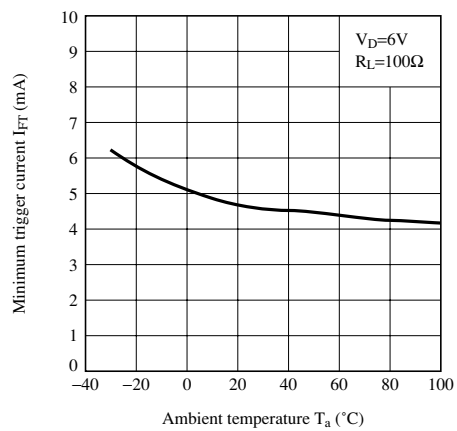
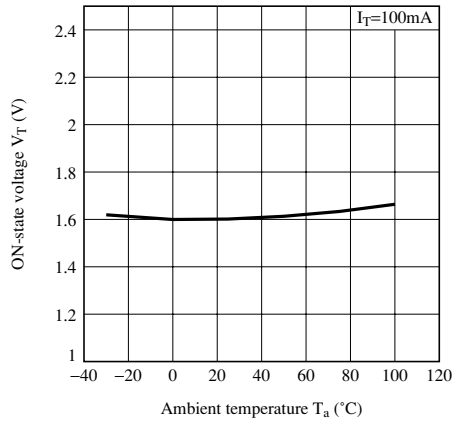
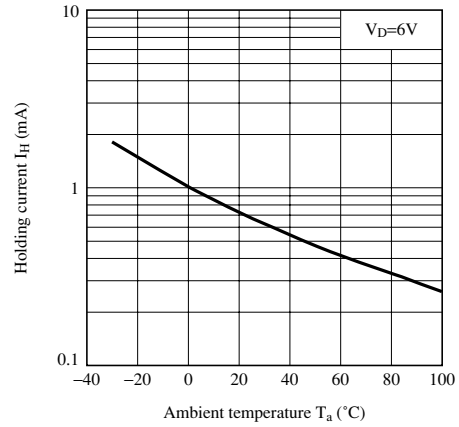
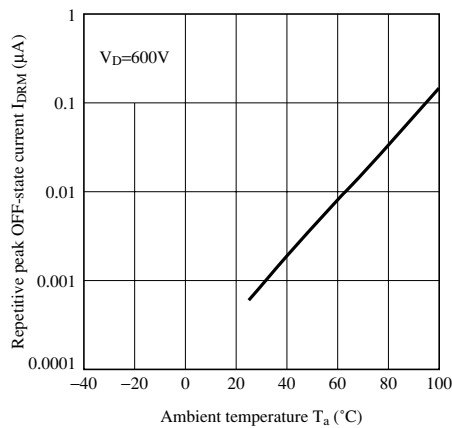
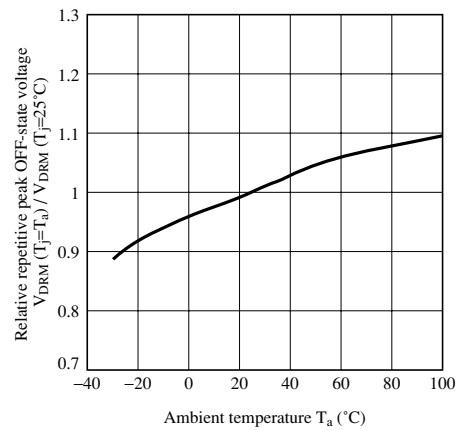
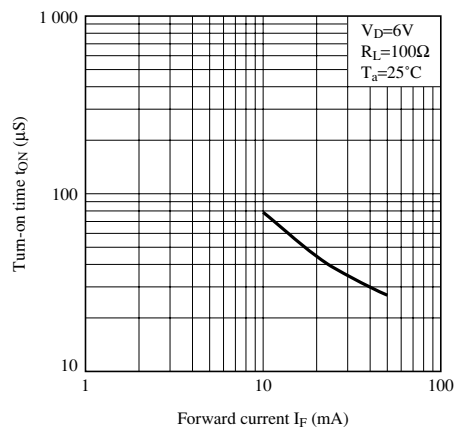


Fig.5 ON-state Voltage vs. Ambient Temperature**Fig.6 Holding Current vs. Ambient Temperature****Fig.7 Repetitive Peak OFF-state Current vs. Ambient Temperature****Fig.8 Relative Repetitive Peak OFF-state Voltage vs. Ambient Temperature****Fig.9 Turn-on Time vs. Forward Current**

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