

PC3SG11YIZ

Reinforced Insulation Type Mini-flat Package Phototriac Coupler for Triggering

■ Features

1. Mini-flat package
2. Isolation voltage between input and output ($V_{iso (rms)}$):3.75kV)
3. Internal isolation distance (0.4mm or more)
4. Recognized by UL (File No. E64380)
Approved by TÜV (VDE0884, File No. R9151574)

■ Applications

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

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

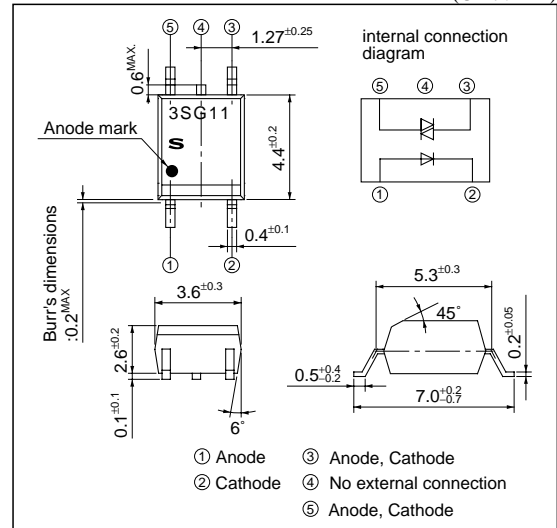
	Parameter	Symbol	Rating	Unit
Input	*1 Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
Output	*1 RMS ON-state current	$I_{T (rms)}$	0.05	A
	Peak one cycle surge current	I_{surge}	0.6 (50Hz sine wave)	A
	Repetitive peak OFF-state voltage	V_{DRM}	600	V
*2	Isolation voltage	$V_{iso (rms)}$	3.75	kV
	Operating temperature	T_{opr}	-30 to +100	$^{\circ}\text{C}$
	Storage temperature	T_{stg}	-40 to +125	$^{\circ}\text{C}$
	Soldering temperature	T_{sol}	260 (For 10s)	$^{\circ}\text{C}$

*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, $f=60\text{Hz}$

■ 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}	$V_D=V_{DRM}$	–	–	10^{-6}	A
	ON-state voltage	V_T	$I_T=0.05\text{A}$	–	–	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	$V_D=1/\sqrt{2} \cdot V_{DRM}$	100	1 000	–	V/ μs
Transfer characteristics	Minimum trigger current	I_{FT}	$V_D=6\text{V}, R_L=100\Omega$	–	–	10	mA
	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

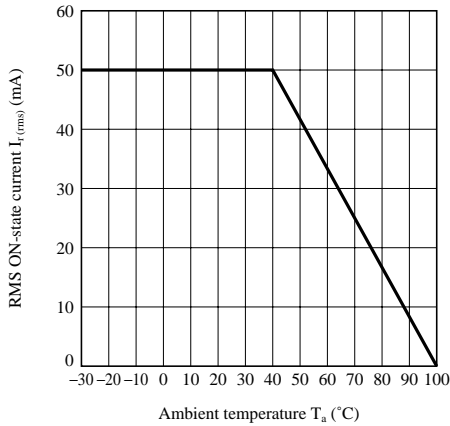
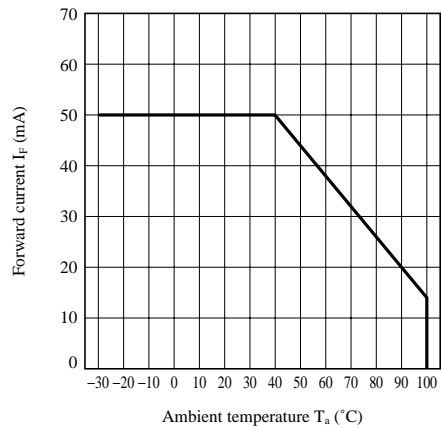


Fig.2 Forward Current vs. Ambient Temperature



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