S2S3/S2S4

Mini-Flat Type Phototriac Coupler

■ Features

1. Popular type
2. Small package type
3. Conforming to UL double protective insulation (V_{iso} : 3 750V_{rms})
4. Infrared reflow soldering type (230˚C, within 30 seconds)
5. Recognized by UL (No .64380)

■ Model Line-ups

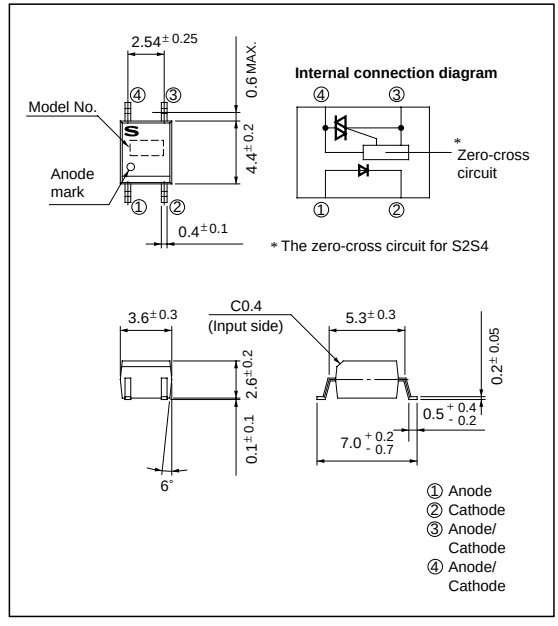
	For 100/200V line
Zero-cross circuit not built in	**S2S3**
Zero-cross circuit built in	**S2S4**

■ Application

1. For SSR

■ Outline Dimensions

(Unit : mm)

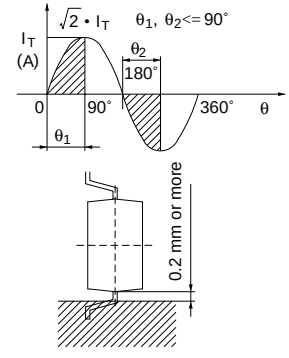


■ Absolute Maximum Ratings

(Ta=25˚C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
Output	*1 RMS ON-state current	I_T	0.05	A_{rms}
	*2 Peak one cycle surge current	I_{surge}	0.6 (50Hz sine wave)	A
	Repetitive peak OFF-state voltage	V_{DRM}	600	V
*3 Isolation voltage		V_{iso}	3 750	V_{rms}
Operating temperature		T_{opr}	-30 to+100	˚C
Storage temperature		T_{stg}	-40 to+125	˚C
*4 Soldering temperature		T_{sol}	260	˚C

*1 The definition of conduction angle θ of RMS ON-state current I_T should be as shown in the right drawing. For decrease curve, refer to Fig. 2.
*2 50Hz sine curve
*3 40 to 60% RH, AC for 1 minute
*4 For 10 seconds



■ 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	μA
Output	Repetitive peak OFF-state current		I_{DRM}	V_{DRM} = Rated	-	-	1	μA
	ON-state voltage		V_T	I_T = 0.05A	-	-	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	$V_{DRM} = 1/\sqrt{2}$ • Rated	100	1 000	-	V/μs
	Zero-cross voltage	**S2S4**	V_{OX}	I_F = 15mA, Resistance load	-	-	35	V
Transfer characteristics	Minimum trigger current		I_{FT}	V_D = 6V, R_L = 100Ω	-	-	10	mA
	Insulation resistance		R_{ISO}	DC500V, 40 to 60% RH	5×10^{10}	1×10^{11}	-	Ω
	Turn-on time	**S2S3**	t_{on}	V_D = 6V, R_L = 100Ω, I_F = 20mA	-	-	100	μs
		S2S4			-	-	50	

Fig. 1 Forward Current vs. Ambient Temperature

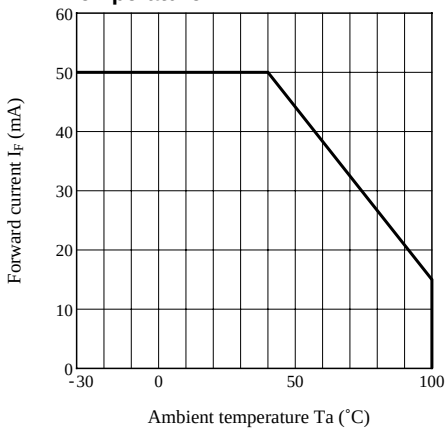
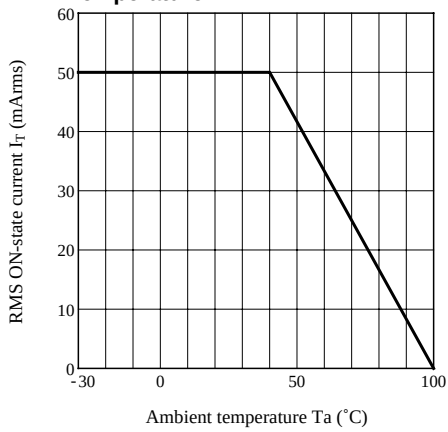


Fig. 2 RMS ON-state Current vs. Ambient Temperature



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- Office automation equipment
- Telecommunication equipment [terminal]
- Test and measurement equipment
- Industrial control
- Audio visual equipment
- Consumer electronics

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- Alarm equipment
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