S21MT1/S21MT2

Compact 4-pin DIP Type Phototriac Coupler

■ Features

1. Compact 4-pin DIP type
   (Package area : 2/3 of conventional model)
2. Popular type
3. Recognized by UL (No. E64380)

■ Model Line-ups

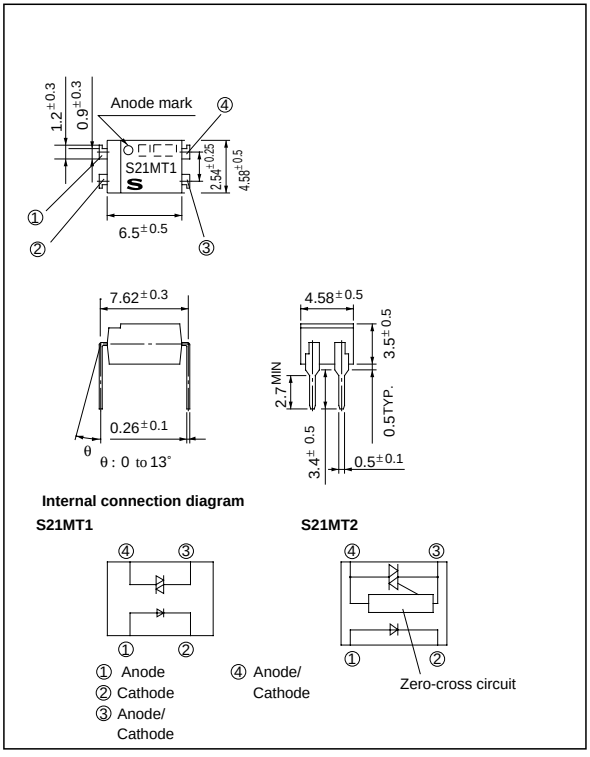
	For 200V line
Zero-cross circuit not built in	**S21MT1**
Zero-cross circuit built in	**S21MT2**

■ 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	0.1	A_{rms}
	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}	5 000	V_{rms}
Operating temperature		T_{opr}	-30 to+100	˚C
Storage temperature		T_{stg}	-55 to+125	˚C
*3 Soldering temperature		T_{sol}	260 (for 10 sec)	˚C

*1 Decrease in the ambient temperature range of the Absolute Max. Rating : Shown in Figs. 1 and 2.
*2 40 to 60% RH, AC for 1 minute
*3 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	-	-	3.0	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/√2) • Rated	100	-	-	V/μs
	Zero-cross voltage	**S21MT2**	V_{OX}	I_F = 15mA, Resistance load	-	-	35	V
Transfer characteristics	Minimum trigger current		I_{FT}	R_L = 100Ω, V_D = 6V	-	-	10	mA
	Insulation resistance		R_{ISO}	DC = 500V, 40 to 60% RH	5 x 10^{10}	1 x 10^{11}	-	Ω
	Turn-on time	**S21MT1**	t_{on}	V_D = 6V, R_L = 100Ω, I_F = 20mA	-	-	100	μs
		S21MT2			-	-	50	

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

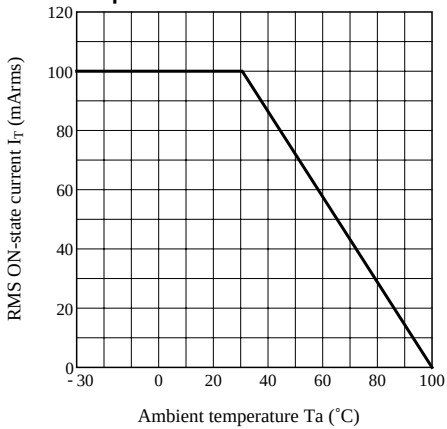
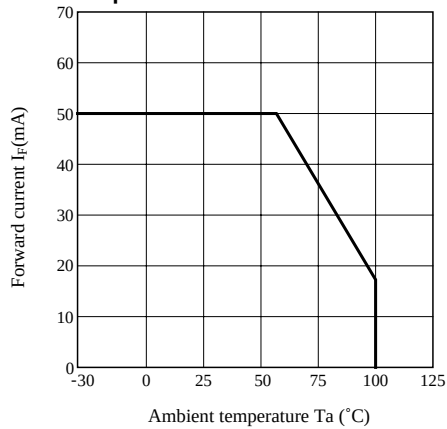


Fig. 2 Forward Current vs. Ambient Temperature



● Please refer to the chapter "Precautions for Use." (Page 78 to 93)