S101DH1/S101DH2 S201DH1/S201DH2

16-Pin DIP Type SSR for Low Power Control

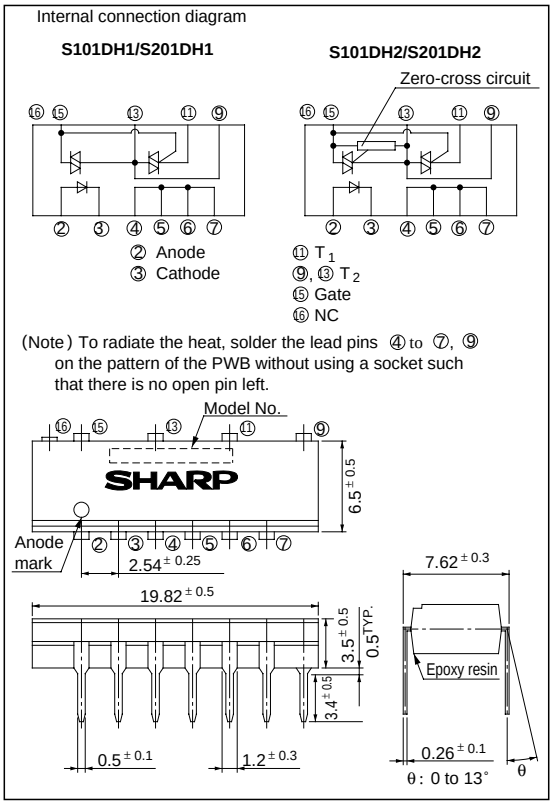
■ Features

1. Compact
   (16-pin dual-in-line package type)
2. High output current
   (RMS ON-state current I_T : 1.5A$_{rms}$)
3. Built-in zero-cross circuit
   (S101DH2 / S201DH2)
4. Recognised by UL, file No. E94758
5. Approved by CSA, No. LR63705

■ Applications

1. Air conditioners
2. Microwave ovens
3. Home appliances

■ Outline Dimensions (Unit : mm)



■ Model Line-ups

	For 100V lines	For 200V lines
No built-in zero-cross circuit	**S101DH1**	**S201DH1**
Built-in zero-cross circuit	**S101DH2**	**S201DH2**

■ Absolute Maximum Ratings (Ta = 25°C)

Parameter		Symbol	Rating		Unit
			S101DH1/ S101DH2	S201DH1/ S201DH2	
Input	Forward current	I_F	50		mA
	Reverse current	V_R	6		V
Output	RMS ON-state current	I_T	1.5		A$_{rms}$
	Peak one cycle surge current	I_{surge}	15 (50Hz , sine wave)		A
	Repetitive peak OFF-state voltage	V_{DRM}	400	600	V
*1 Isolation voltage		V_{iso}	4,000		V_{rms}
Operating temperature		T_{opr}	- 25 to + 85		°C
Storage temperature		T_{stg}	- 40 to + 125		°C
Soldering temperature		T_{sol}	260 (For 10 seconds)		°C

*1 AC for 1 minute, 40 to 60% RH, f = 60Hz

" In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that occur in equipment using any of SHARP's devices, shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest version of the device specification sheets before using any SHARP's device."

■ Electrical 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	-	-	100	μA
	ON-state voltage		V_T	I_T = 1.5A	-	-	1.7	V
	Holding current		I_H	V_D = 6V	-	-	25	mA
	Critical rate of rise of OFF-state voltage	S101DH1/S101DH2	dV/dt	V_{DRM} = 1/ $\sqrt{2}$ • Rated	200	-	-	V/μs
		S201DH1/S201DH2			100	-	-	
	Zero-cross voltage	S101DH2/S201DH2	V_{OX}	Resistance load, I_F = 15mA	-	-	35	V
Transfer characteristics	Minimum trigger current		I_{FT}	V_D = 6V, R_L = 100Ω	-	-	10	mA
	Isolation resistance		R_{ISO}	DC500V, 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

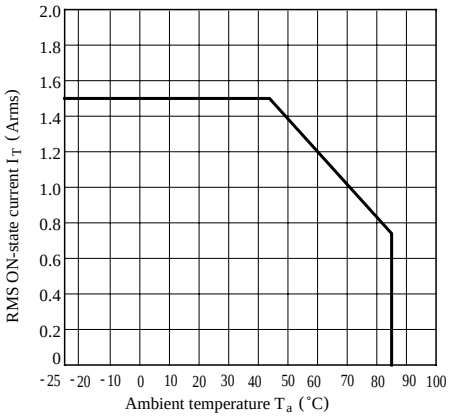


Fig. 2 Forward Current vs. Ambient Temperature

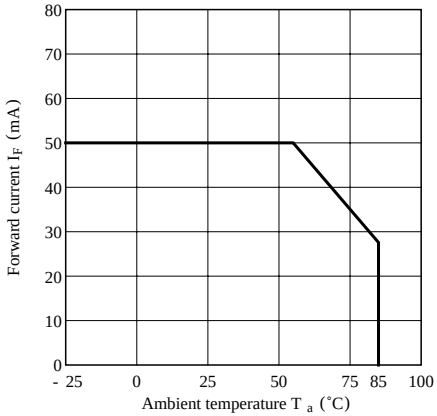


Fig. 3 Forward Current vs. Forward Voltage

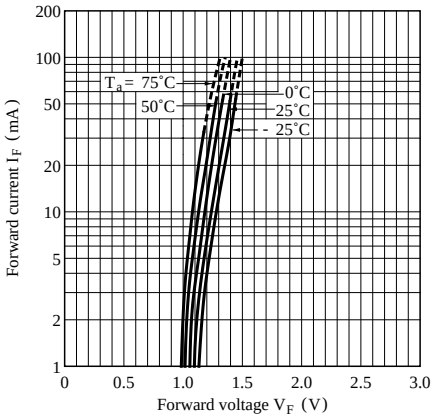


Fig. 4 Minimum Trigger Current vs. Ambient Temperature (Typical Value) (S101DH1)

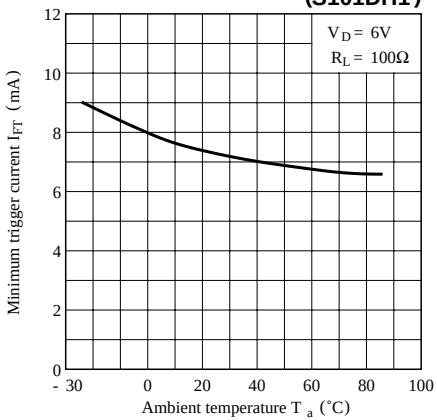


Fig. 5-a Minimum Trigger Current vs. Ambient Temperature (Typical Value)(S101DH2, S201DH2)

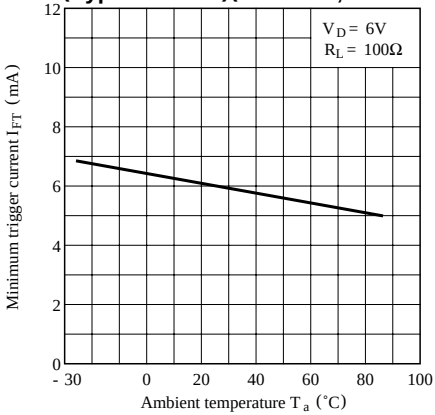


Fig. 5-b Minimum Trigger Current vs. Ambient Temperature (Typical Value) (S201DH1)

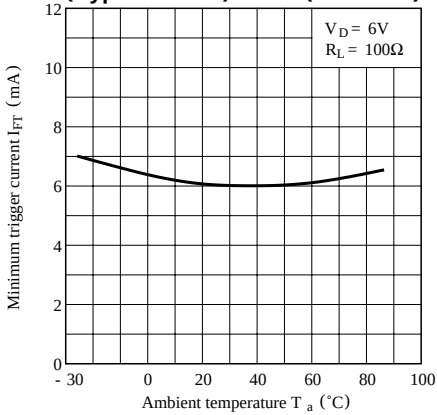


Fig. 6 ON-state Voltage vs. Ambient Temperature (Typical Value)

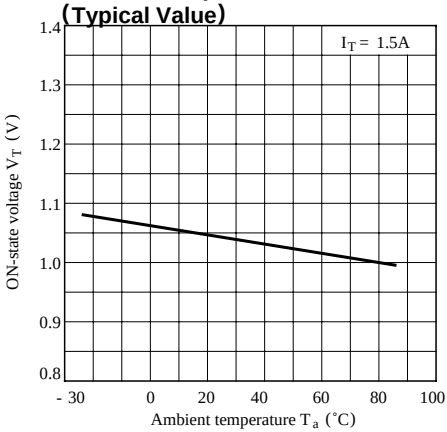


Fig. 7 Relative Holding Current vs. Ambient Temperature (Typical Value)

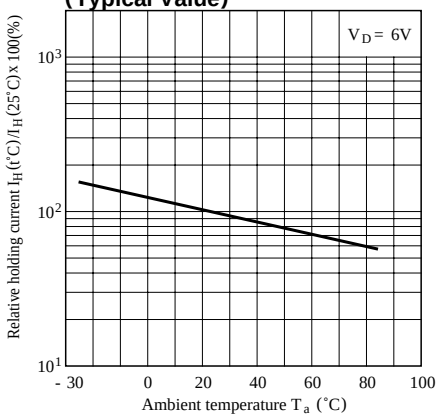


Fig. 8 ON-state Current vs. ON-State Voltage (Typical Value)

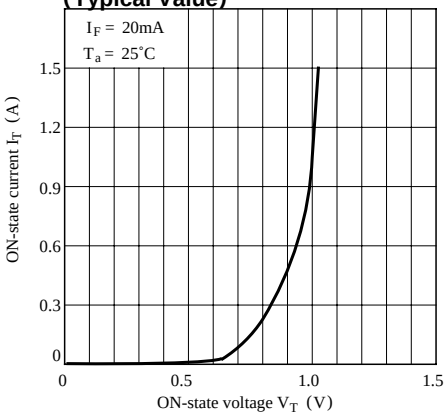


Fig. 9 Turn-on Time vs. Forward Current (Typical Value) (S101DH1)

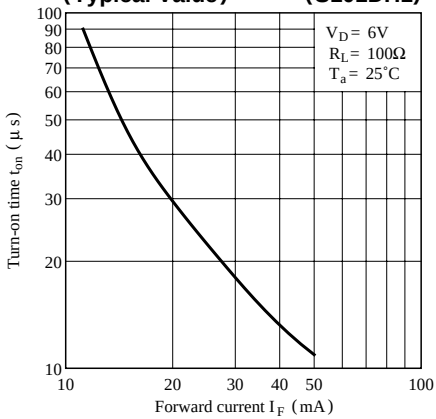


Fig.10 Turn-on Time vs. Forward Current (Typical Value) (S101DH2, S201DH2)

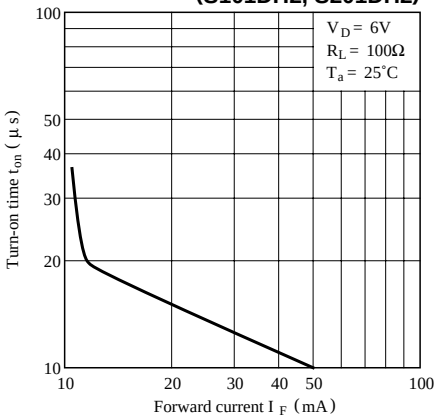
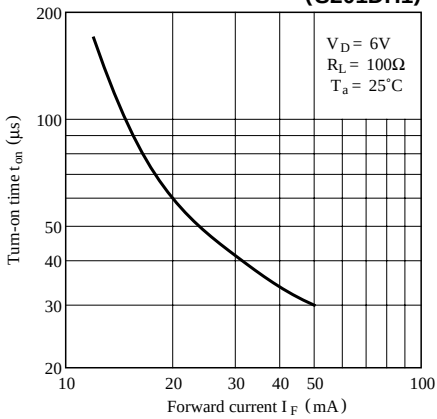


Fig.11 Turn-on Time vs. Forward Current (Typical Value) (S201DH1)



● Please refer to the chapter " Precautions for Use."