

S11 MD63

2-channel Type **Phototriac**
Coupler

■ Features

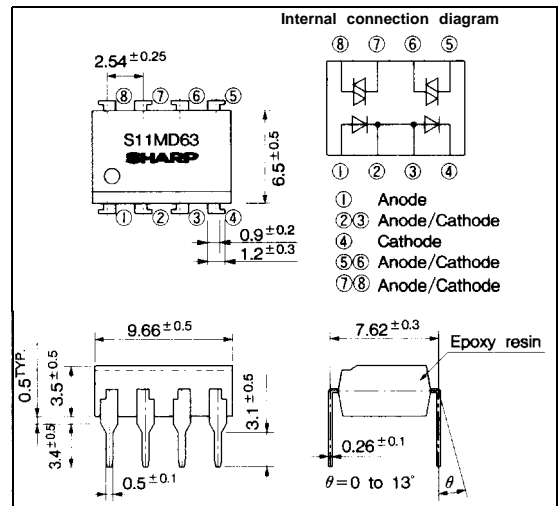
1. 2-channel type
2. Enables to be directly connected with telephone circuit
3. Low ON-state voltage
 V_T : MAX. 1.3V at $I_T=20\text{mA}$
4. Capable of load drive
 I_T : 100mA_{rms}

■ Applications

1. Circuit switching equipment for digital exchanger

■ 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 | RMS ON-state current | I_T | *20.1 (Resistance load) | A _{rms} |
| | Peak one cycle surge current | I_{surge} | *12 (50Hz sine wave) *1.2 (50Hz sine wave) | |
| | Repetitive peak OFF-state voltage | V_{DRM} | 400 | V |
| | *1 Isolation voltage | V_{ISO} | 1.5 | kV _{rms} |
| Operating temperature | | T_{opr} | -20 to +70 | °C |
| Storage temperature | | T_{stg} | -30 to +100 | °C |
| Soldering temperature | | T_{sol} | 260 (10s) | °C |

*1 AC for 1 min., 40 to 60%RH, f=50,60Hz

*2 A phototriac (each one)

*3 A package (each one)

(T_a = 25°C)

■ Electro-optical Characteristics

| | Parameter | Symbol | Conditions | MIN. | TYP. | MAX. | Unit |
|--|-----------------------------------|---------------------------------|---|----------------------|------------------|------|------|
| Input | *Forward voltage | V _F | I _F = 30mA | — | 1.2 | 1.4 | |
| | *4 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 = 0.1A | — | 1.4 | 2.0 | V |
| | | | I _T = 20mA | — | | 1.3 | |
| | 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 | 200/0.8 | — | — | V/μs | |
| Transfer characteristics | Minimum trigger current | I _{FT} | V _D = 6V, R _L = 100Ω | — | — | 20 | mA |
| | Isolation resistance | R _{ISO} | DC500V 40 to 60% RH | 5 × 10 ¹⁰ | 10 ¹¹ | — | Ω |
| | Turn-on time | t _{ON} | V _D = 6V, I _F = 30mA R _L = 100Ω | — | 40 | 100 | μs |

*4 A light emitting element (each one)

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

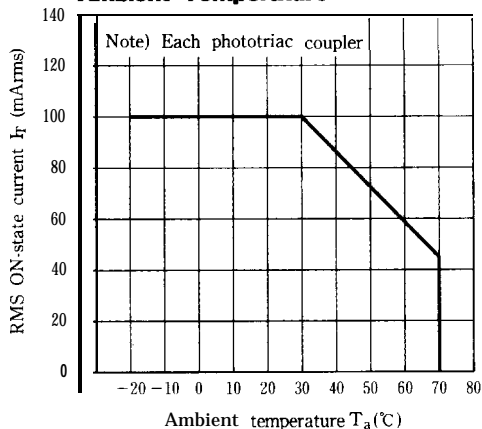
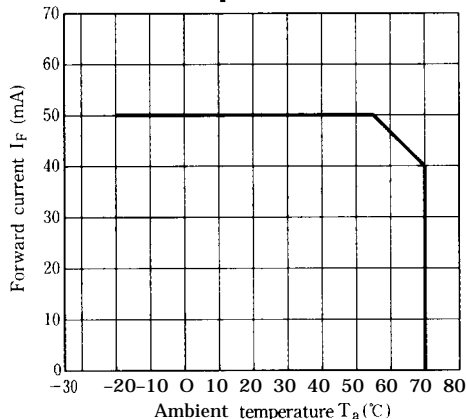
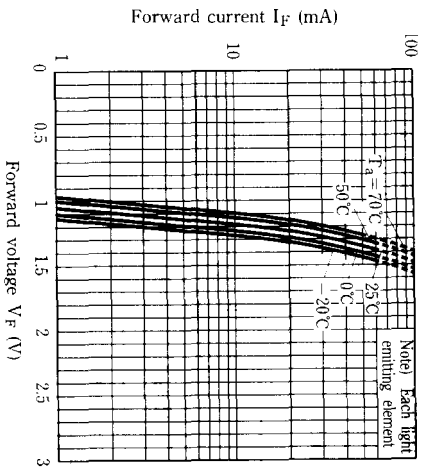


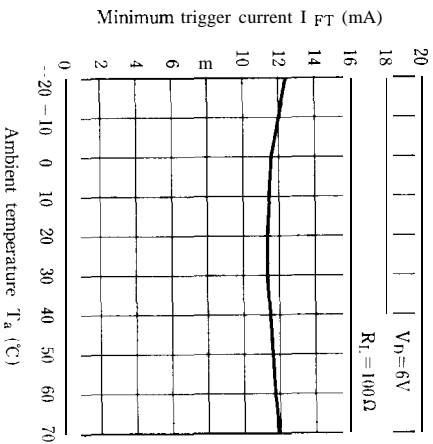
Fig. 2 Forward Current vs. Ambient Temperature



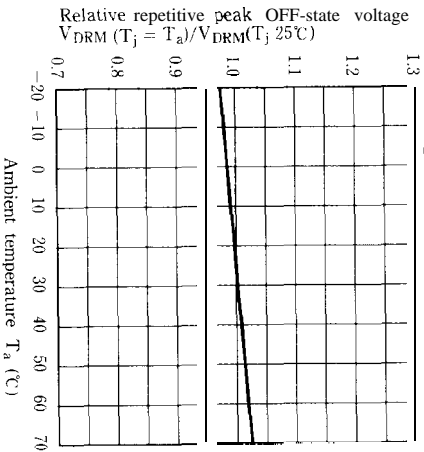
Forward Current vs. Forward Voltage



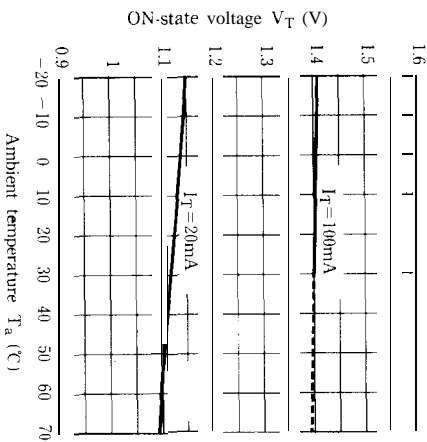
Minimum Trigger Current vs. Ambient Temperature



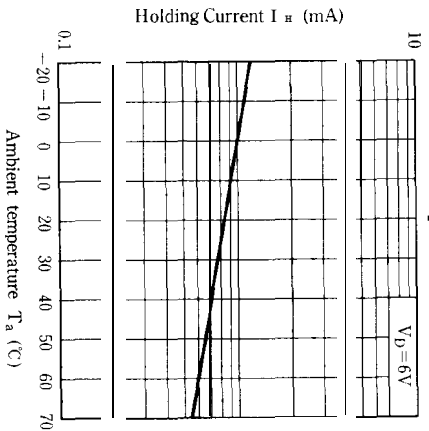
Relative Repetitive Peak OFF-state Voltage vs. Ambient Temperature



ON-state Voltage vs. Ambient Temperature



Holding Current vs. Ambient Temperature



Repetitive Peak OFF-state Current vs. Ambient Temperature

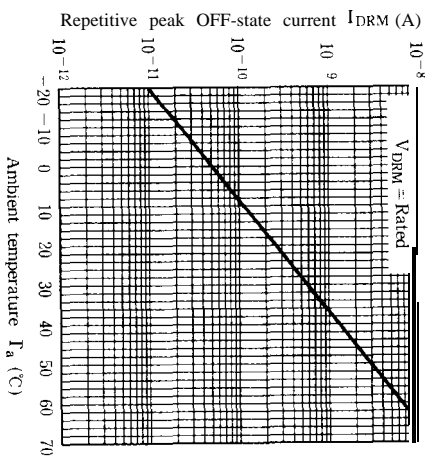


Fig. 9 ON-state Current vs. ON-state Voltage

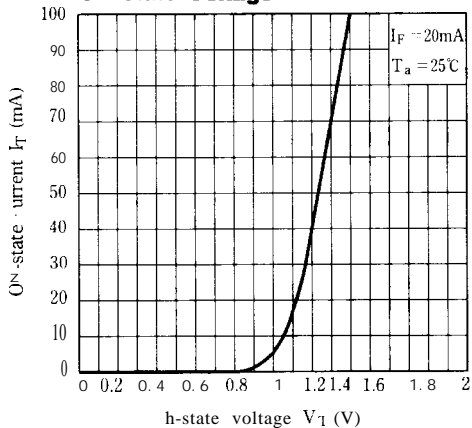
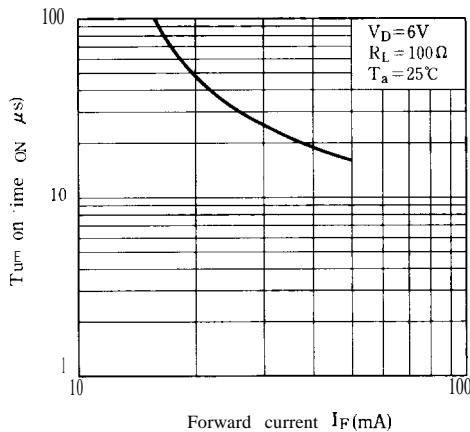


Fig.10 Turn-on Time vs. Forward Current



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