

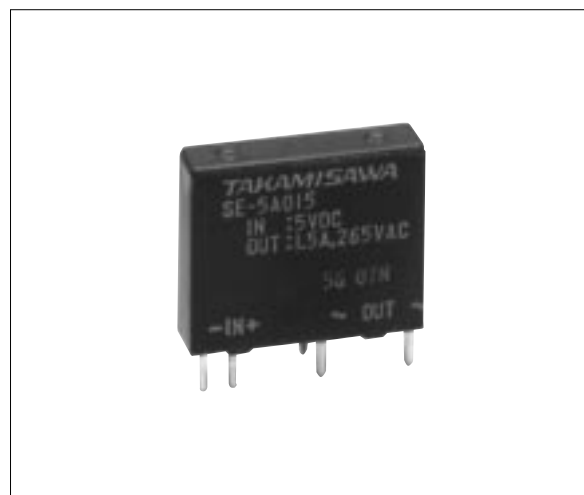
# SOLID STATE RELAY

# MAXIMUM LOAD CURRENT 1.5 A / 2A

# SE SERIES

## ■ FEATURES

- Conforms to UL, CSA standards
- Ultra slim and light weight, SIL terminals type
  - Size: 5.0 (W) × 20.0 (L) × 17.0 (H)mm
  - Weight: approximately 4.0 g
- High reliability, long life and maintenance free
- High isolation (between input and output)
  - Dielectric strength: 2,500 Vrms
- Internal zero cross circuit type available



## ■ ORDERING INFORMATION

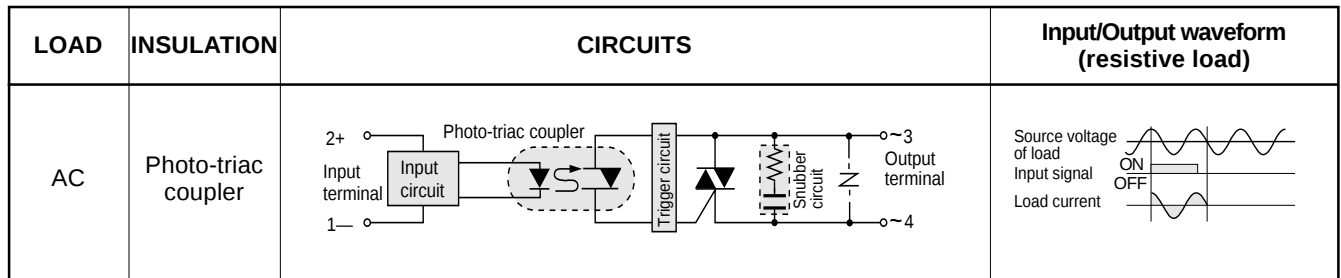
[Example]      SE   -   12   A   02   V   F  
                   (a)    (b)   (c)   (d)   (e)   (f)

|     |                              |                                                         |
|-----|------------------------------|---------------------------------------------------------|
| (a) | Series Name                  | SE : SE Series                                          |
| (b) | Nominal Voltage (Input side) | 3 : 3 VDC<br>5 : 5 VDC<br>12 : 12 VDC<br>24 : 24 VDC    |
| (c) | Load Voltage                 | A : AC type                                             |
| (d) | Load Current                 | 015 : 1.5 A<br>02 : 2.0 A                               |
| (e) | Output Protection            | Nil : No varistor<br>V : Varistor type (2.0A type only) |
| (f) | Zero Cross Circuit           | F : No zero cross type<br>C : Zero cross type           |

## ■ SPECIFICATIONS

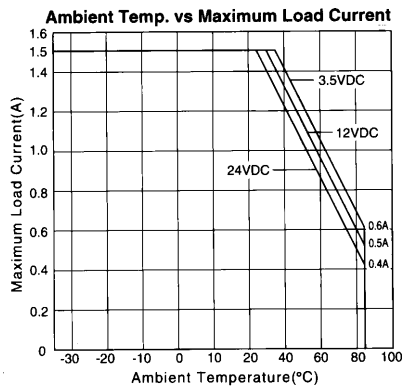
| Item                        |                                | AC                            |                          | Remarks                                      |
|-----------------------------|--------------------------------|-------------------------------|--------------------------|----------------------------------------------|
|                             |                                | 1.5 A Type                    | 2.0 A Type               |                                              |
| INPUT side                  | Nominal Voltage (DC)           | 3 V, 5 V, 12 V, 24 V          |                          |                                              |
|                             | Operate Range                  | ±20% of nominal voltage       |                          |                                              |
|                             | Must Operate Voltage           | 80% of nominal voltage        |                          |                                              |
|                             | Must Release Voltage           | Minimum 1 V (minimum 0.5 V*)  |                          | *3 VDC type                                  |
|                             | Input Impedance                | 3 VDC Type                    | 180Ω ±10%                | 130Ω ±10%                                    |
|                             |                                | 5 VDC Type                    | 470Ω ±10%                | 330Ω ±10%                                    |
|                             |                                | 12 VDC Type                   | 1.5 kΩ ±10%              | 1.0 kΩ ±10%                                  |
|                             |                                | 24 VDC Type                   | 3.0 kΩ ±10%              | 2.2 kΩ ±10%                                  |
| OUTPUT side                 | Load Voltage Range             | 15 to 265 Vrms                |                          |                                              |
|                             | Maximum Load Current           | 1.5 Arms                      | 2.0 Arms                 | see CHARACTERISTIC DATA                      |
|                             | Minimum Load Current           | 10 mArms                      |                          |                                              |
|                             | 1 Cycle Surge Current          | 50 A (60 Hz)                  |                          |                                              |
|                             | Max. Off-State Leakage Current | 0.5 mA rms<br>1.0 mA rms      | 1.0 mA rms<br>2.0 mA rms | (at 100 V rms 60 Hz)<br>(at 200 V rms 60 Hz) |
|                             | Max. On-State Voltage Drop     | 1.2 V rms                     | 1.3 V rms                | at maximum load current                      |
| Maximum Operate Time        |                                | 1 ms                          |                          |                                              |
| Maximum Release Time        |                                | 1/2 cycle +1ms                |                          |                                              |
| Insulation Resistance       |                                | Minimum 1,000 MΩ (at 500 VDC) |                          | for input-output                             |
| Dielectric Strength         |                                | 2,500 Vrms 1 minute           |                          | for input-output                             |
| Operating Temperature Range |                                | −30°C to + 85°C               |                          |                                              |
| Storage Temperature Range   |                                | −40°C to +100°C               |                          |                                              |
| Case Color                  |                                | Black                         |                          |                                              |
| Weight                      |                                | Approximately 4.0 g           | 5.1 g                    |                                              |

## ■ BLOCK DIAGRAM

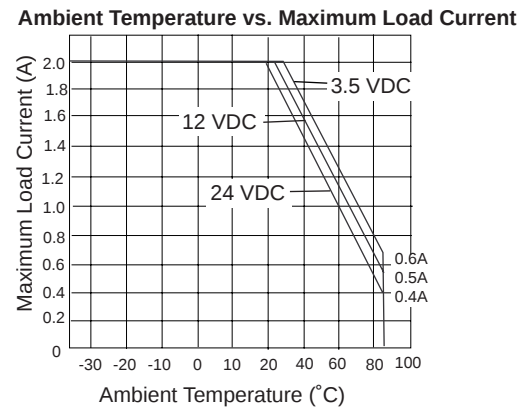


## ■ CHARACTERISTIC DATA

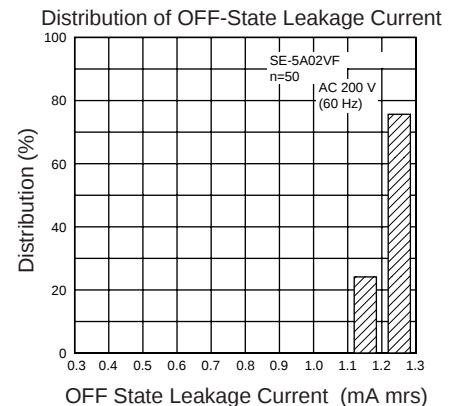
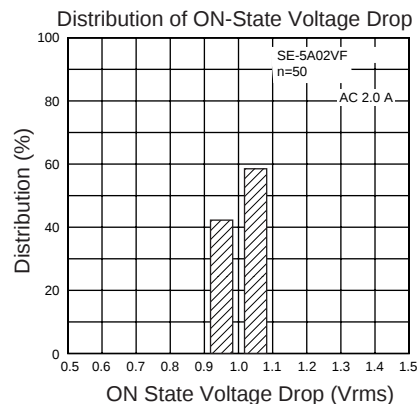
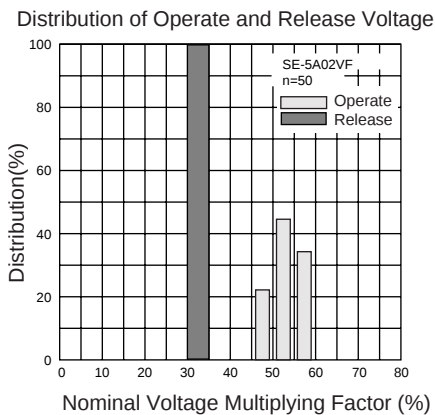
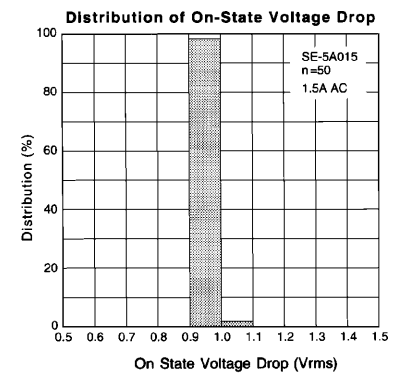
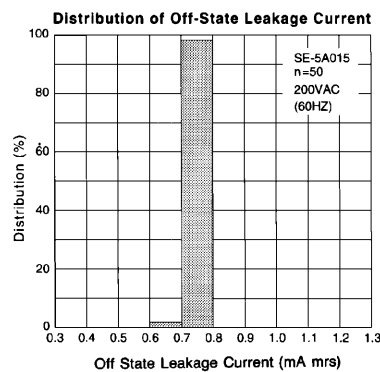
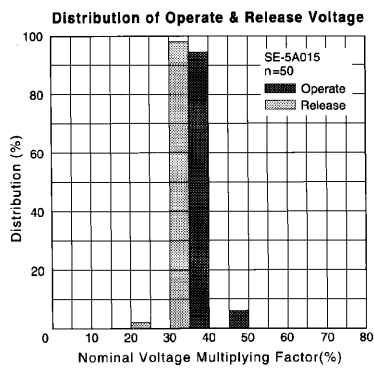
SE-( )A015 type



SE-( )A02 type



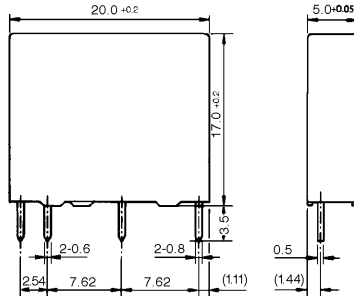
## ■ REFERENCE DATA



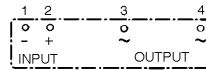
## ■ DIMENSIONS

### ● Dimensions

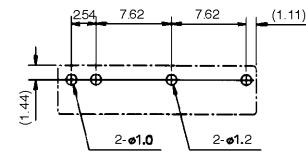
SE- ( ) A015 type



### ● Schematics (BOTTOM VIEW)

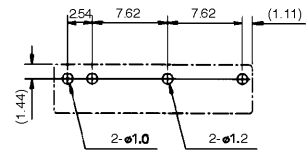
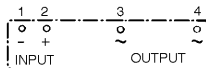
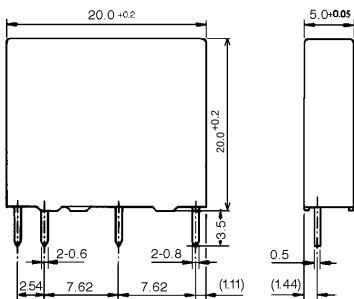


### ● PC board mounting hole layout (BOTTOM VIEW)



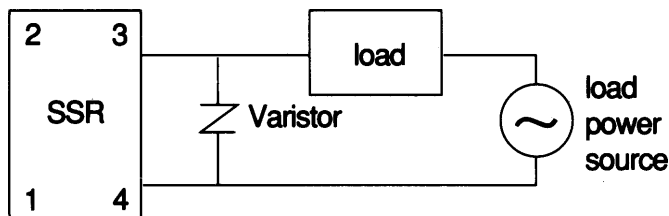
Unit: mm

SE- ( ) A02 type



## ■ NOTES

When large noise and surge are impressed on the load side, there is the possibility of the occurrence of malfunction or damage. In such a case, a varistor should be inserted in the circuit.



### Fujitsu Components International Headquarter Offices

**Japan**  
Fujitsu Component Limited  
Gotanda-Chuo Building  
3-5, Higashigotanda 2-chome, Shinagawa-ku  
Tokyo 141, Japan  
Tel: (81-3) 5449-7010  
Fax: (81-3) 5449-2626  
Email: [promothq@ft.ed.fujitsu.com](mailto:promothq@ft.ed.fujitsu.com)  
Web: [www.fcl.fujitsu.com](http://www.fcl.fujitsu.com)

**North and South America**  
Fujitsu Components America, Inc.  
250 E. Caribbean Drive  
Sunnyvale, CA 94089 U.S.A.  
Tel: (1-408) 745-4900  
Fax: (1-408) 745-4970  
Email: [marcom@fcai.fujitsu.com](mailto:marcom@fcai.fujitsu.com)  
Web: [www.fcai.fujitsu.com](http://www.fcai.fujitsu.com)

**Europe**  
Fujitsu Components Europe B.V.  
Diamantlaan 25  
2132 WV Hoofddorp  
Netherlands  
Tel: (31-23) 5560910  
Fax: (31-23) 5560950  
Email: [info@fceu.fujitsu.com](mailto:info@fceu.fujitsu.com)  
Web: [www.fceu.fujitsu.com](http://www.fceu.fujitsu.com)

**Asia Pacific**  
Fujitsu Components Asia Ltd.  
102E Pasir Panjang Road  
#04-01 Citilink Warehouse Complex  
Singapore 118529  
Tel: (65) 6375-8560  
Fax: (65) 6273-3021  
Email: [fcal@fcal.fujitsu.com](mailto:fcal@fcal.fujitsu.com)  
[www.fcal.fujitsu.com](http://www.fcal.fujitsu.com)