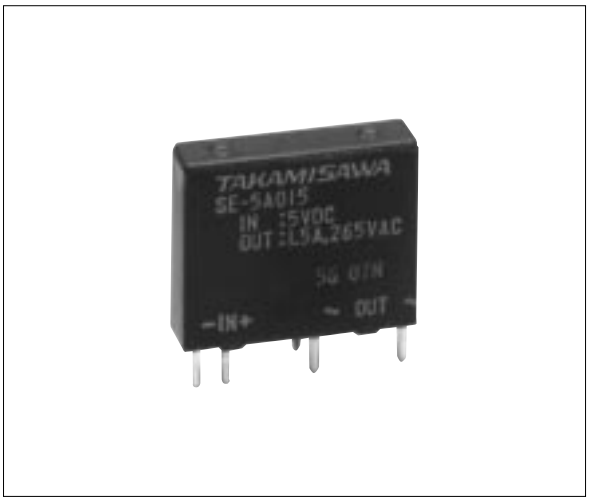
SOLID STATE RELAY

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

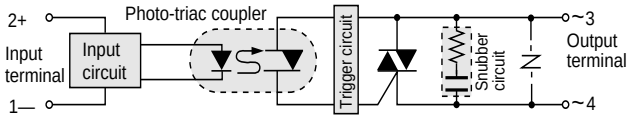
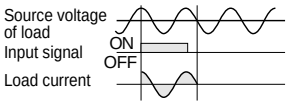
[Example] SE (a) – 12 (b) A (c) 02 (d) C (e) V (f) F (g)

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

■ SPECIFICATIONS

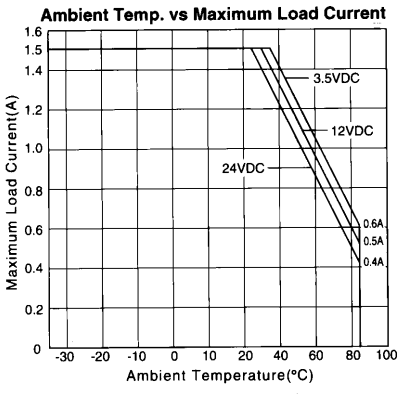
Item			AC		Remarks
			1.5 A Type	2.0 A Type	
INPUT side	Nominal Voltage (DC)		3 V, 5 V, 12 V, 24 V		
	Operate Range		±20% of nominal voltage		
	Must Operate Voltage		80% of nominal voltage		
	Must Release Voltage		Minimum 1 V (minimum 0.5 V*)		*3 VDC type
	Input Impedance	3 VDC Type	180Ω ±10%	130Ω ±10%	
		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 1.0 mA rms	1.0 mA rms 2.0 mA rms	(at 100 V rms 60 Hz) (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

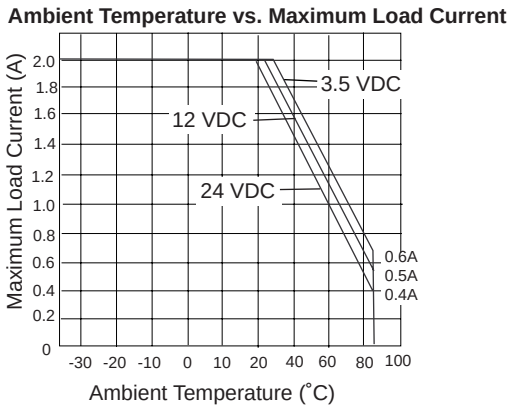
LOAD	INSULATION	CIRCUITS	Input/Output waveform (resistive load)
AC	Photo-triac coupler		

■ CHARACTERISTIC DATA

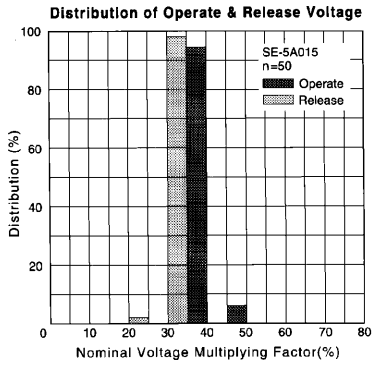
SE-( )A015 type

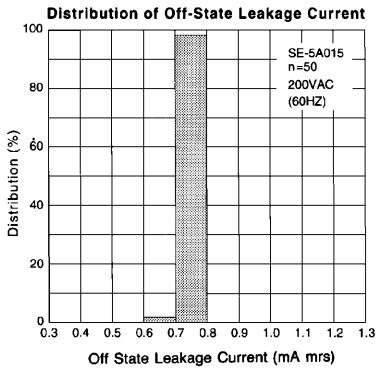


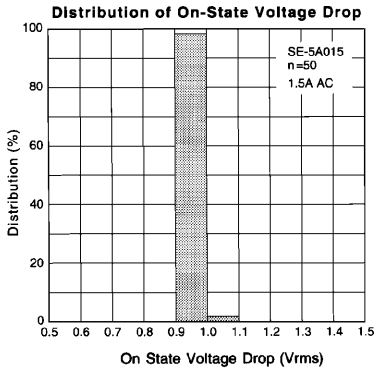
SE-( )A02 type



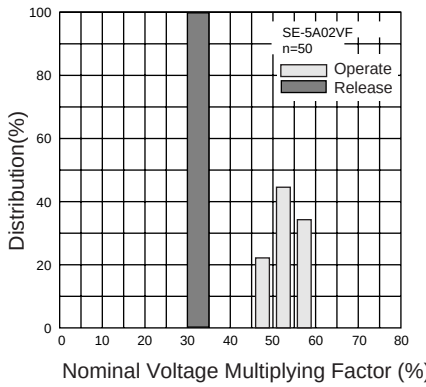
■ REFERENCE DATA



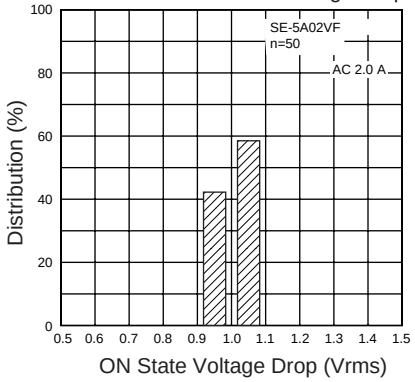




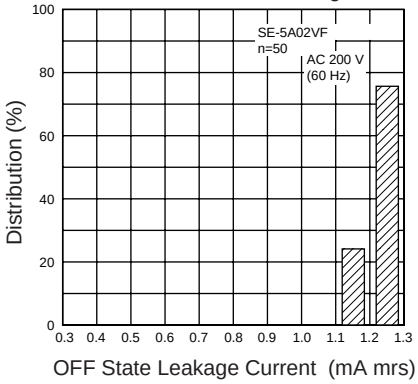
Distribution of Operate and Release Voltage



Distribution of ON-State Voltage Drop



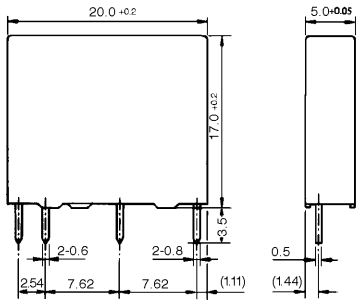
Distribution of OFF-State Leakage Current



■ DIMENSIONS

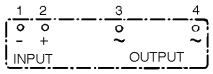
● Dimensions

SE- ( ) A015 type



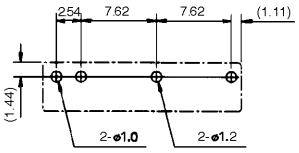
● Schematics

(BOTTOM VIEW)



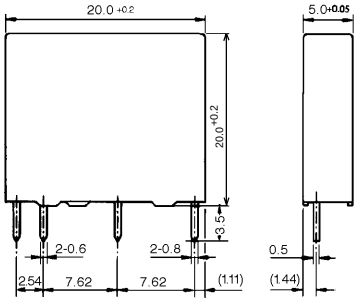
● PC board mounting hole layout

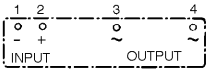
(BOTTOM VIEW)

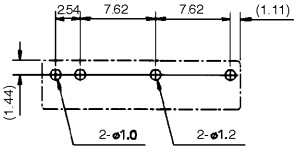


Unit: mm

SE- ( ) A02 type

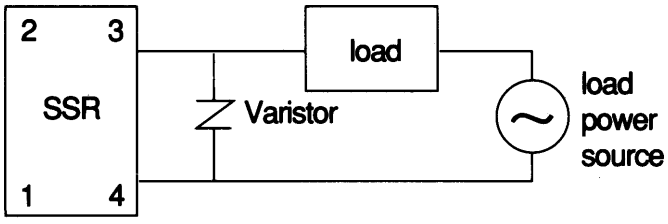






■ NOTES

When large noise and surge are impressed on the load side, there is the possibility of the occurence 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
Web: 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
Web: 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
Web: 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
www.fcal.fujitsu.com

© 2003 Fujitsu Components America, Inc. All company and product names are trademarks or registered trademarks of their respective owners. Rev. 02/18/2003