

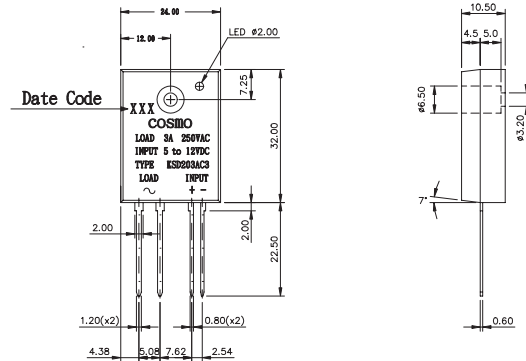
Features

1. Molded epoxy body.
2. Zero crossing circuit.
3. High input/output insulation.
4. Small size and light weight.
5. Can be installed directly on the PC board.
6. Fast reactive speed.
7. Normally open.

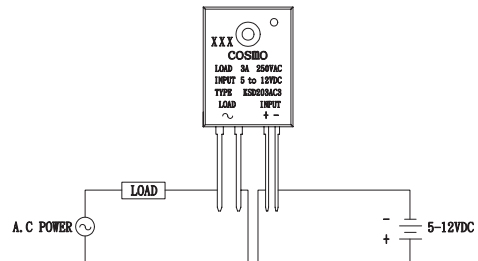
Applications

1. Household Appliances.
2. Temperature Control System.
3. Industrial Automatic Control.
4. Lighting System.
5. Office Appliances.
6. Factory Appliances.

Outside Dimension : Unit (mm)



Schematic : Top View



Absolute Maximum Ratings

(Ta=25 °C)

Parameter	Symbol	Rating	Unit
Input	Input Signal Voltage	V _{IN}	5~12
	Drop-out Voltage	V _{do}	1
Output	RMS on-state current	I _T	3
	Peak one cycle surge current (8.3 ms)	I _{surge}	30
	Repetitive peak-off state Voltage	V _{DRM}	600
	Operating frequency	f	47~70
	Critical rate of rise of on-state current	di/dt	50
	Load supply voltage	V _{out}	250
	Isolation Voltage input to output	V _{iso}	4000
Operating Temperature		T _{opr}	-30~100
Storage Temperature		T _{stg}	-30~125
Soldering Temperature 10 Sec		T _{sol}	260

Electrical Characteristics

(Ta=25 °C)

Parameter	Symbol	Conditions	MIN	TYP	MAX	Unit
Input	Pick-up Voltage	V _{pu}			4	VDC
	Input current	I _{in}	5		25	mA
Output	On-state Voltage	V _T			1.5	Vrms
	Operating Current	I _{op}	50			mArms
	Leakage Current	I _{leak}			7	mArms
	Critical rate of rise of off-state Voltage	dv/dt	50	200		V/μS
	Zero-cross Voltage			Yes		
	Load Voltage Rating	V _{out}	50		280	VAC
Minimum trigger current		I _{FT}			10	mA
Isolation resistance input to output		R _{iso}	10 ¹⁰			Ω
Turn-on time		T _{on}			8.3	mS
Turn-off time		T _{off}			8.3	mS
Thermal resistance (between junction and case)		R _{th (j-c)}		1.3		°C/W

Note1 : Output (dv/dt) protection is provided in all models, and they are designed to switch resistive or inductive loads to 0.2 power factor. The dv/dt rating is based on source impedance of 50 ohms.

Data Curve

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

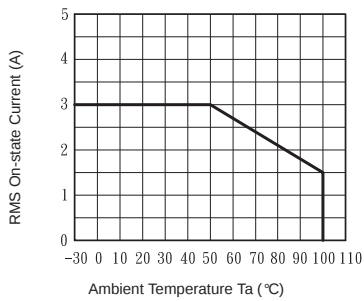


Fig.2 Surge Current vs. Time

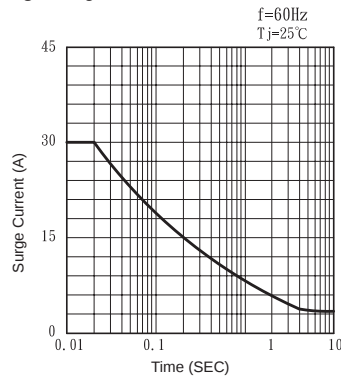


Fig.3 Open Circuit Leak Current vs. Supply Voltage

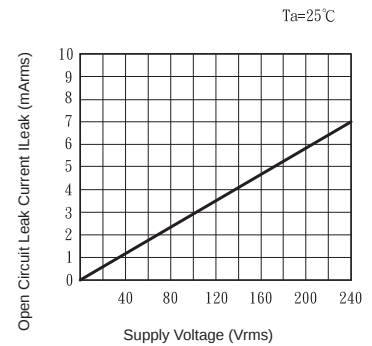


Fig.4 RMS On-state Current vs. Case Temperature

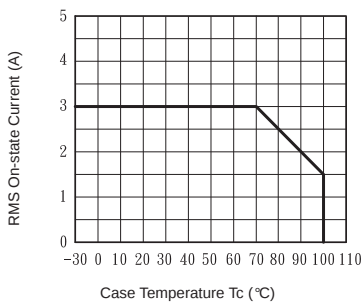


Fig.5 Input Voltage vs. Ambient Temperature

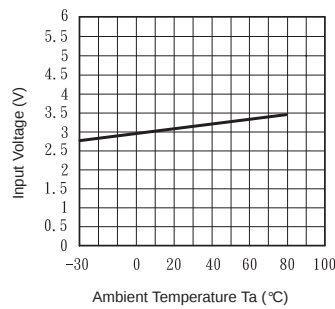


Fig.6 Input Current vs. Input voltage

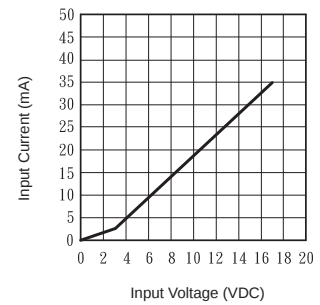


Fig.7 Action waveform

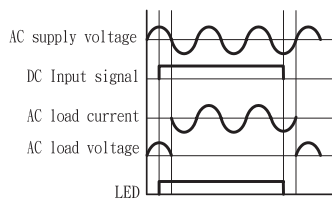
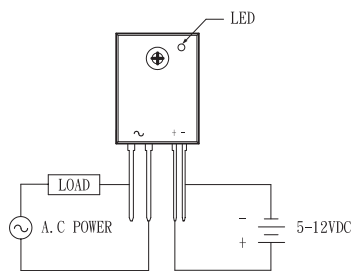
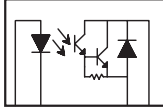
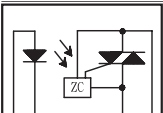
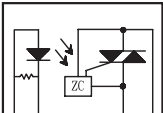
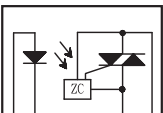
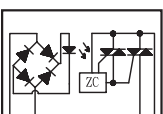


Fig.8 WIRING DIAGRAM



Model NO.	Circuit Schematic Top View	Features	Absolute Maximum Ratings			Electrical Characteristics	Package	Safety standards approval (UL)
			RMS on-state current I _T (Arms)	Repetitive peak-off state voltage V _{DRM} (V)	Isolation Voltage (AC) V _{ISO} (Arms)			
KSD203DC2		LOAD: 3A 100VDC 30W INPUT: 4V to 24VDC	3	100	4000	25	4-pin SIP	
KSD203AC2		LOAD: 3A 250VAC INPUT: 4V to 32VDC	3	600	4000	10	4-pin SIP	
KSD203AC3		LOAD: 3A 250VAC, INPUT: 5V to 12VDC	3	600	4000	10	4-pin SIP	
KSD205AC3		LOAD: 5A 250VAC, INPUT: 5V to 12VDC	5	600	4000	10		
KSD210AC3		LOAD: 10A 250VAC, INPUT: 5V to 12VDC	10	600	4000	10		
KSD215AC3		LOAD: 15A 250VAC, INPUT: 5V to 12VDC	15	600	4000	25		
KSD225AC3		LOAD: 25A 250VAC, INPUT: 5V to 12VDC	25	600	4000	25		
KSD240AC3		LOAD: 40A 250VAC, INPUT: 5V to 12VDC	40	600	4000	25		
KSD210AC8		LOAD: 10A 250VAC, INPUT: 4V to 32VDC	10	600	4000	10	Panel Mount	○
KSD215AC8		LOAD: 15A 250VAC, INPUT: 4V to 32VDC	15	600	4000	25		○
KSD225AC8		LOAD: 25A 250VAC, INPUT: 4V to 32VDC	25	600	4000	25		○
KSD240AC8		LOAD: 40A 250VAC, INPUT: 4V to 32VDC	40	600	4000	25		○
KSD425AC8		LOAD: 25A 480VAC, INPUT: 4V to 32VDC	25	800	4000	25		○
KSD440AC8		LOAD: 40A 480VAC, INPUT: 4V to 32VDC	40	800	4000	25		○
KSA210AC8		LOAD: 10A 250VAC, INPUT: 90 to 240VAC	10	600	4000	10	Panel Mount	
KSA215AC8		LOAD: 15A 250VAC, INPUT: 90 to 240VAC	15	600	4000	25		
KSA225AC8		LOAD: 25A 250VAC, INPUT: 90 to 240VAC	25	600	4000	25		
KSA240AC8		LOAD: 40A 250VAC, INPUT: 90 to 240VAC	40	600	4000	25		
KSA425AC8		LOAD: 25A 480VAC, INPUT: 90 to 240VAC	25	800	4000	25		
KSA440AC8		LOAD: 40A 480VAC, INPUT: 90 to 240VAC	40	800	4000	25		

*1 FIMKO, NEMKO, SEMKO. *2 FIMKO. *3 ○: APPROVED, △: UNDER PROCESSING. *4 FIMKO, NEMKO.