

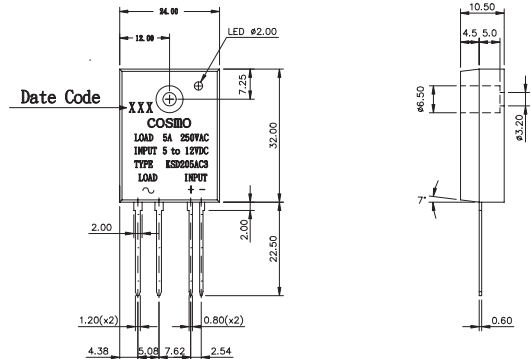
Features

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.

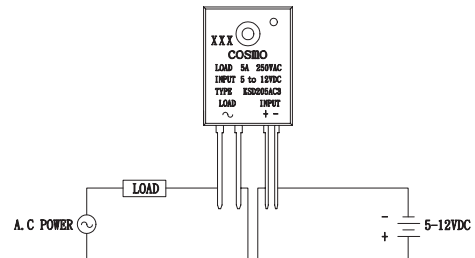
Applications

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	5
	Peak one cycle surge current (8.3 ms)	I _{surge}	50
	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}	I _T =1Arms		4	VDC
	Input current	I _{in}	V _{in} =5-12V	5	25	mA
Output	On-state Voltage	V _T	I _T =1Arms		1.5	Vrms
	Operating Current	I _{op}	V _{out} =240Vrms	50		mArms
	Leakage Current	I _{leak}	V _{out} =240Vrms		7	mArms
	Critical rate of rise of off-state Voltage	dv/dt	See Note 1	50	200	V/μS
	Zero-cross Voltage			Yes		
	Load Voltage Rating	V _{out}	I _T =50mArms MIN	50	280	VAC
	Minimum trigger current	I _{FT}	V _{DRM} =600V		10	mA
	Isolation resistance input to output	R _{iso}	DC500V	10 ¹⁰		Ω
	Turn-on time	T _{on}	60Hz AC		8.3	mS
	Turn-off time	T _{off}	60Hz AC		8.3	mS
	Thermal resistance (between junction and case)	R _{th} (j-c) I		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

- (1) With infinite heat sink
- (2) With heat sink (70x70x2mm Al plate)
- (3) With heat sink (50x50x2mm Al plate)
- (4) Without heat sink

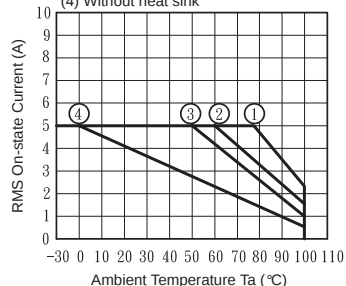


Fig.2 Surge Current vs. Time

$f=60\text{Hz}$
 $T_j=25^\circ\text{C}$

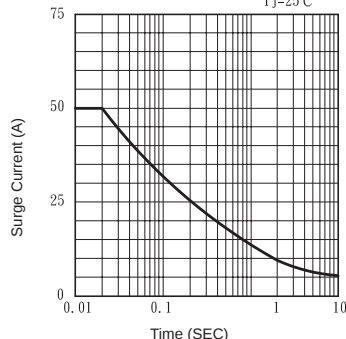


Fig.3 Open Circuit Leak Current vs. Supply Voltage

$T_a=25^\circ\text{C}$

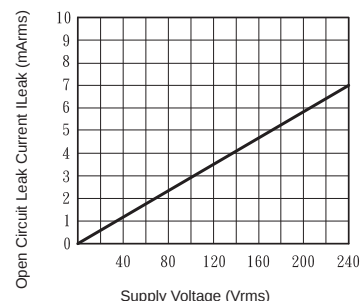


Fig.4 RMS On-state Current vs. Case Temperature

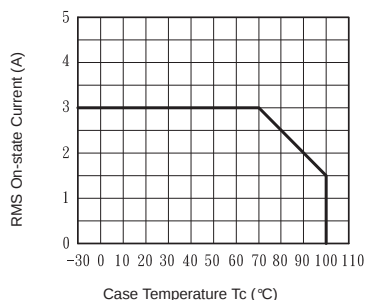


Fig.5 Input Voltage vs. Ambient Temperature

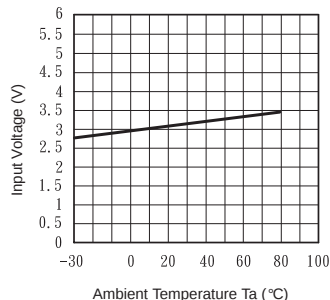


Fig.6 Input Current vs. Input voltage

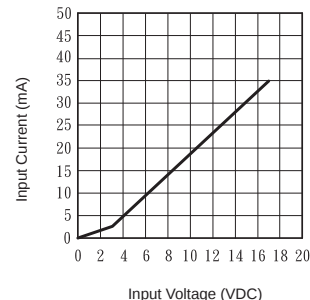


Fig.7 Action waveform

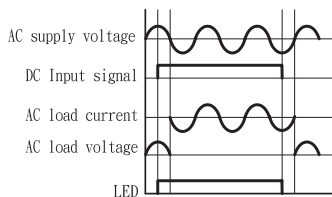


Fig.8 WIRING DIAGRAM

