

FAT5~30W Three-way isolation series

Typical performance

- Three-way output mode
- Total output power 5~30W
- The main output voltage is 5V
 - The output voltage of the auxiliary circuit is $\pm 5 \sim \pm 24V$
- High isolation voltage 2500VAC(3000VAC or 4000VAC according to customer requirements)
- Horizontal mounting
- Isolated output mode
- Switching frequency 60kHz



Input characteristic

Input voltage range	85~265VAC	100~360VDC
	165~265VAC	200~360VDC

Output characteristic

Output characteristic	Vout1 nominal output voltage $\pm 2\%$ /Vout2 nominal output voltage $\pm 5\%$
Load effect	10%~100%I _{on} Change time $\Delta V_{outnom} \leq \pm 0.5\%$
Source effect	V _{inmin} ~V _{inmax} Change time $\Delta V_{outnom} \leq \pm 0.2\%$
Ripple noise	$\leq 1\%$ V _{outnom} (max)
Conversion efficiency	See product selection table
Temperature coefficient	$\leq \pm 0.02\%/^{\circ}C$ (Maximum value)

General characteristic

Isolation voltage	V _{in} -v _{out} , V _{IN} -FG, V _{OUT} -FG are 2500VAC/min(3000VAC or 4000VAC can be achieved according to customer requirements)
Insulation resistance	$\geq 100M\Omega$
Mean time between failures	$\geq 5 \times 10^5 h$
Protection function	Short-circuit protection (self-recovery), overheat protection (self-recovery)



Operating temperature	-25~+55 °C full load /+55~+85 °C derated use (-40~+60 °C can be achieved according to customer requirements)
Storage temperature	-55~+125°C
Relative humidity	10RH~90RH
Cooling mode	Natural cooling

■ Selection list

Model number	Input voltage range Vac/Vdc	Output voltage/current(V ₁)/(A ₁) (V ₂)/(A ₂)	Maximum capacitive load (μF)	Typical efficiency (%)
FAT10-0505-NFCI	165V-265V/200V-360 V	5/1.80 ±5/0.10		75
FAT10-0512-NFCI	165V-265V/200V-360 V	5/1.60 ±12/0.10		80
FAT10-0515-NFCI	165V-265V/200V-360 V	5/1.40 ±15/0.10		80
FAT10-0524-NFCI	165V-265V/200V-360 V	5/1.10 ±24/0.10		80
FAT15-0505-NFCI	165V-265V/200V-360 V	5/2.80 ±5/0.10		76
FAT15-0512-NFCI	165V-265V/200V-360 V	5/2.60 ±12/0.10		80
FAT15-0515-NFCI	165V-265V/200V-360 V	5/2.40 ±15/0.10		80
FAT15-0524-NFCI	165V-265V/200V-360 V	5/2.10 ±24/0.10		80
FAT20-0505-NFCI	165V-265V/200V-360 V	5/3.80 ±5/0.10		77
FAT20-0512-NFCI	165V-265V/200V-360 V	5/3.50 ±12/0.10		80
FAT20-0515-NFCI	165V-265V/200V-360 V	5/3.40 ±15/0.10		80
FAT20-0524-NFCI	165V-265V/200V-360 V	5/3.00 ±24/0.10		80
FAT30-0505-NFCI	165V-265V/200V-360 V	5/5.80 ±5/0.10		75
FAT30-0512-NFCI	165V-265V/200V-360 V	5/5.50 ±12/0.10		80
FAT30-0515-NFCI	165V-265V/200V-360 V	5/5.40 ±15/0.10		80
FAT30-0524-NFCI	165V-265V/200V-360 V	5/5.00 ±24/0.10		80



FAT5-0505-WFCI	85V-265V/100V-360V	5/0.80	±5/0.10		74
FAT5-0512-WFCI	85V-265V/100V-360V	5/0.70	±12/0.10		80
FAT5-0515-WFCI	85V-265V/100V-360V	5/0.60	±15/0.10		80
FAT5-0524-WFCI	85V-265V/100V-360V	5/0.60	±24/0.05		80
FAT10-0505-WFC I	85V-265V/100V-360V	5/1.80	±5/0.10		75
FAT10-0512-WFC I	85V-265V/100V-360V	5/1.60	±12/0.10		80
FAT10-0515-WFC I	85V-265V/100V-360V	5/1.40	±15/0.10		80
FAT10-0524-WFC I	85V-265V/100V-360V	5/1.10	±24/0.10		80
FAT15-0505-WFC I	85V-265V/100V-360V	5/2.80	±5/0.10		76
FAT15-0512-WFC I	85V-265V/100V-360V	5/2.60	±12/0.10		80
FAT15-0515-WFC I	85V-265V/100V-360V	5/2.40	±15/0.10		80
FAT15-0524-WFC I	85V-265V/100V-360V	5/2.10	±24/0.10		80
FAT20-0505-WFC I	85V-265V/100V-360V	5/3.80	±5/0.10		77
FAT20-0512-WFC I	85V-265V/100V-360V	5/3.50	±12/0.10		80
FAT20-0515-WFC I	85V-265V/100V-360V	5/3.40	±15/0.10		80
FAT20-0524-WFC I	85V-265V/100V-360V	5/3.00	±24/0.10		80



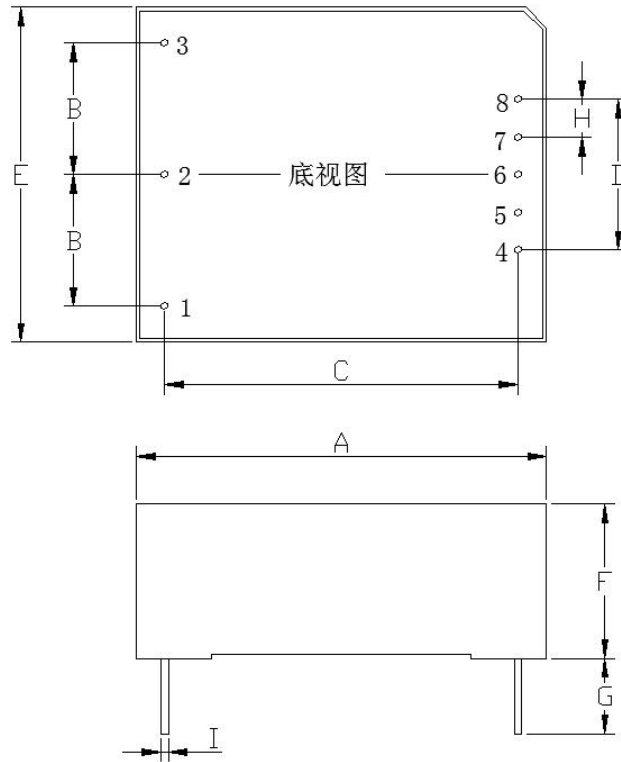
■ Selection list

Model number	Input voltage range Vac/Vdc	Output voltage/current (V ₁)/(A ₁) (V ₂)/(A ₂)	Maximum capacitive load (μ F)	Typical efficiency (%)
FAT10-05V05- NFCI	165V-265V/200V-360V	5/1.00 \pm 5/0.50		75
FAT10-05V12- NFCI	165V-265V/200V-360V	5/0.80 \pm 12/0.25		80
FAT15-05V05- NFCI	165V-265V/200V-360V	5/2.00 \pm 5/0.50		76
FAT15-05V12- NFCI	165V-265V/200V-360V	5/1.60 \pm 12/0.30		80
FAT15-05V15- NFCI	165V-265V/200V-360V	5/1.20 \pm 15/0.30		80
FAT20-05V05- NFCI	165V-265V/200V-360V	5/3.00 \pm 5/0.50		77
FAT20-05V12- NFCI	165V-265V/200V-360V	5/2.60 \pm 12/0.30		80
FAT20-05V15- NFCI	165V-265V/200V-360V	5/2.20 \pm 15/0.30		80
FAT20-05V24- NFCI	165V-265V/200V-360V	5/2.00 \pm 24/0.20		80
FAT30-05V05- NFCI	165V-265V/200V-360V	5/5.00 \pm 5/0.50		75
FAT30-05V12- NFCI	165V-265V/200V-360V	5/3.60 \pm 12/.050		80
FAT30-05V15- NFCI	165V-265V/200V-360V	5/3.60 \pm 15/0.40		80
FAT30-05V24- NFCI	165V-265V/200V-360V	5/3.10 \pm 24/0.30		80
FAT10-05V05- WFCI	85V-265V/100V-360V	5/1.00 \pm 5/0.50		75
FAT10-05V12- WFCI	85V-265V/100V-360V	5/0.80 \pm 12/0.25		80
FAT15-05V05- WFCI	85V-265V/100V-360V	5/2.00 \pm 5/0.50		76
FAT15-05V12- WFCI	85V-265V/100V-360V	5/1.60 \pm 12/0.30		80
FAT15-05V15- WFCI	85V-265V/100V-360V	5/1.20 \pm 15/0.30		80
FAT20-05V05- WFCI	85V-265V/100V-360V	5/3.00 \pm 5/0.50		77
FAT20-05V12- WFCI	85V-265V/100V-360V	5/2.60 \pm 12/0.30		80



WFCI				
FAT20-05V15- WFCI	85V-265V/100V-360V	5/2.20 ±15/0.30		80
FAT20-05V24- WFCI	85V-265V/100V-360V	5/2.00 ±24/0.20		80

■ Product diagram



unit: mm

■ Dimensions and shell material

Shell material	Plastic case				Aluminium case
	2.5W(mm)	5W(mm)	10/15W(mm)	20W(mm)	
Dim	2.5W(mm)	5W(mm)	10/15W(mm)	20W(mm)	30W(mm)
A	48.5±0.5	55±0.5	62±0.5	70±0.5	71.5±0.5
B	12±0.3	17.5±0.3	17.5±0.3	20.5±0.3	20.5±0.3
C	40.5±0.5	47±0.5	54±0.5	62±0.5	62±0.5
D	16±0.5	20±0.5	20±0.5	23±0.5	23±0.5
E	36±0.5	45±0.5	45±0.5	48±0.5	49.5±0.5
F	20.5±0.5	21.5±0.5	22.5±0.5	23.5±0.5	23.5±0.5
G	10Min		8Min		
H	4.0±0.3	5.0±0.3		5.75±0.3	
I*	1.2±0.1				

*: The metal encapsulated power module is 1.0±0.1

■ Pin definition

Definition	1	2	3	4	5	6	7	8
Instructions	FG	N	L	-V ₁	+V ₁	-V ₂	COM	+V ₂