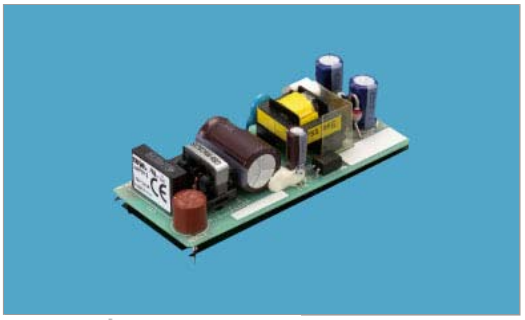
VAF5



Features

- Small and compact size
- Built-in Inrush Current Protection
- P.C. board mount AC/DC converter
- Built-in Over Voltage Protection
- RoHS Compliant

Safety Agency Approvals

Complies with DEN-AN

UL1950, C-UL recognized, TUV approved

EMI Compliance

- FCC-B
- CISPR22-B
- EN55022-B
- VCCI-B

EMC Compliance

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11
- EN55022-B

3 year warranty(refer to Instruction Manual)

Model	Input Voltage [V]	Output Wattage [W]	DC Output [V/A]
VAF503	DC 110 - 370 AC 85 - 264	3.3	3.3V 1A (peak 1.2A)
VAF505	DC 110 - 370 AC 85 - 264	5	5V 1A (peak 1.2A)
VAF512	DC 110 - 370 AC 85 - 264	5.4	12V 0.45A (peak 0.54A)
VAF524	DC 110 - 370 AC 85 - 264	5.28	24V 0.22A (peak 0.27A)

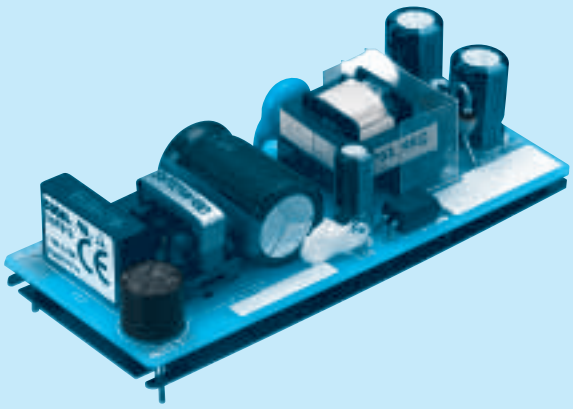
COSEL **On-board type**

VAF5

Ordering information

VAF 5 05

① ② ③



①Series name
②Output wattage
③Output voltage

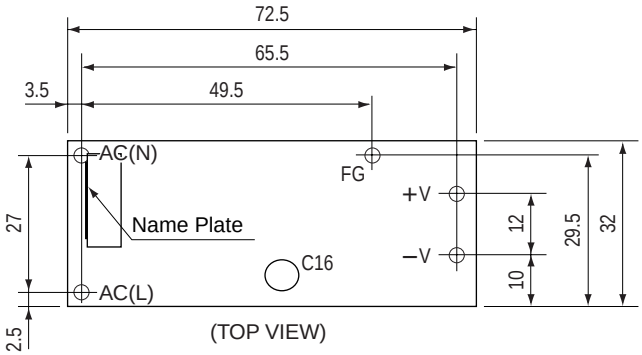
MODEL		VAF503	VAF505	VAF512	VAF515	VAF524
MAX OUTPUT WATTAGE[W]		3.3	5.0	5.4	5.25	5.28
DC OUTPUT	VOLTAGE[V]	3.3	5	12	15	24
	CURRENT[A]	1.0 (Peak 1.2)	1.0 (Peak 1.2)	0.45 (Peak 0.54)	0.35 (Peak 0.42)	0.22 (Peak 0.27)

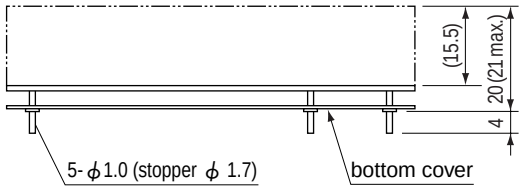
SPECIFICATIONS

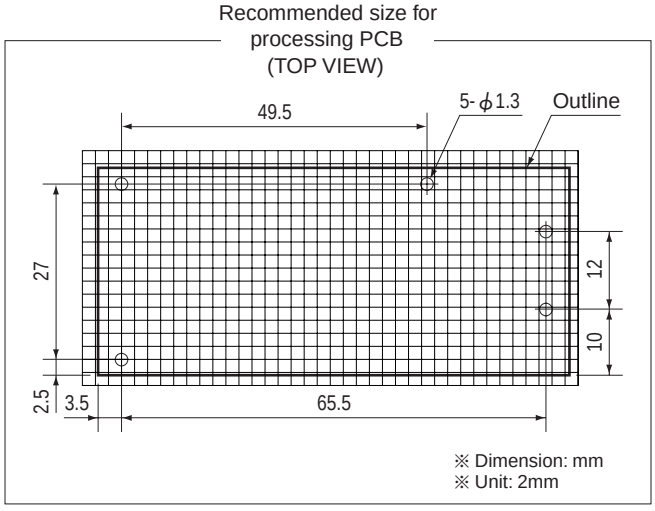
	MODEL		VAF503	VAF505	VAF512	VAF515	VAF524
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370				
	CURRENT[A]	ACIN 100V	0.15typ (Io=100%)				
		ACIN 200V	0.10typ (Io=100%)				
	FREQUENCY[Hz]		47 - 440 or DC				
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)				
		ACIN 200V	30typ (Io=100%)				
	LEAKAGE CURRENT[mA]		0.5max (60Hz, According to IEC60950 and DEN-AN)				
	EFFICIENCY[%]		68typ	77typ	78typ	78typ	81typ
OUTPUT	VOLTAGE[V]		3.3	5	12	15	24
	CURRENT[A]	※1	1.0 (Peak 1.2)	1.0 (Peak 1.2)	0.45 (Peak 0.54)	0.35 (Peak 0.42)	0.22 (Peak 0.27)
	LINE REGULATION[mV]		20max	20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	40max	100max	120max	150max
	RIPPLE[mVp-p]	0 to +55℃ ※2	80max	80max	120max	120max	150max
		-10 - 0℃ ※2	140max	140max	160max	160max	200max
		Io=100 - 120% ※2	180max	180max	200max	200max	240max
	RIPPLE NOISE[mVp-p]	0 to +55℃ ※2	120max	120max	150max	150max	200max
		-10 - 0℃ ※2	160max	160max	180max	180max	230max
		Io=100 - 120% ※2	200max	200max	220max	220max	260max
	TEMPERATURE COEFFICIENT[mV]	-10 to +55℃	100max	50max	120max	150max	300max
	DRIFT[mV]	※3	20max	20max	48max	60max	96max
	OUTPUT VOLTAGE SETTING[V]		3.19 - 3.47	4.90 - 5.30	11.40 - 12.60	14.25 - 15.75	23.0 - 25.0
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed				
	START-UP TIME[ms]		700max (ACIN 85V, Io=100%)				
	HOLD-UP TIME[ms]		10typ (ACIN 85V, Io=100%), 20typ (ACIN 100V, Io=100%)				
PROTECTION CIRCUIT	OVERCURRENT PROTECTION		Works over 125% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION		Works over 115% of rating (By zener diode clamping)				
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)				
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max				
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
	VIBRATION		19.6m/s² 10 - 55Hz, 3minutes period, 60minutes each along X, Y and Z axis (Non operating)				
	IMPACT		196.1m/s² 11ms, once each X, Y and Z axis (Non operating)				
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL, EN60950-1, EN50178 Complies with DEN-AN and IEC60950-1				
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR22-B, EN55022-B				
OTHERS	CASE SIZE/WEIGHT		32×20×72.5mm (W×H×D) / 30g max				
	COOLING METHOD		Convection				

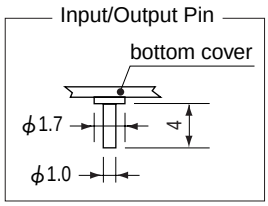
※1 Peak load for 10sec. or less in acceptable if the total wattage is less than the rated wattage.
※2 This is the value that measured on measuring board with capasitor of 22μF. Measuared by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
※3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.

External view





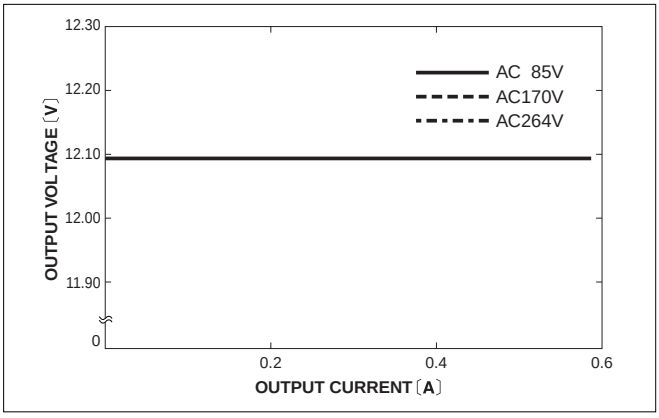




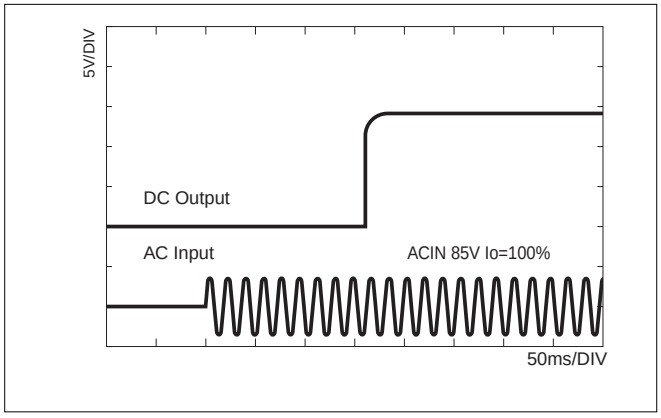
※ Weight: 30g or Less
※Tolerance: ±0.5
※PCB material: CEM-3
※PCB thickness: t=1.0
※Pin material: CPW with solder plated
※Bottom cover material: Bake PL 1256 (Black)
※Recommended hole dia. to PCB: ϕ1.3

Performance data

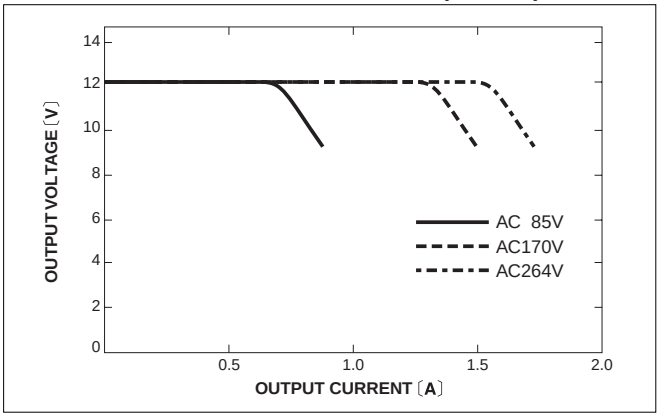
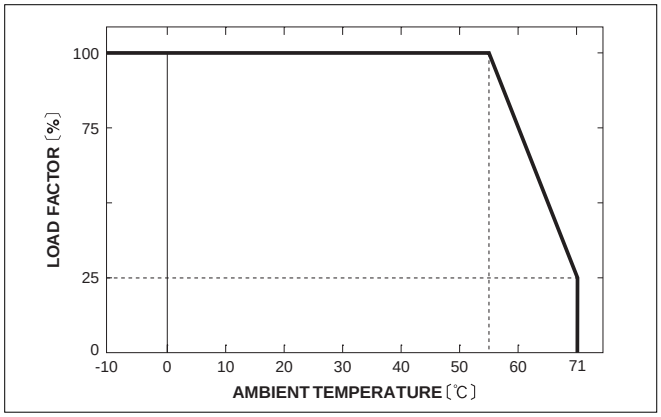
■STATIC CHARACTERISTICS (VAF512)



■RISE TIME (VAF512)



■OVERCURRENT CHARACTERISTICS (VAF512)



■DERATING CURVE