

The C12766-12 and C12766-52 are compact, high-performance high-voltage power supply modules designed to be built into equipment. The internal circuit has sophisticated functions and high efficiency. The C12766-12 and C12766-52 also include various protection functions. The C12766-12 generates a non-insulated, negative high voltage, while the C12766-52 generates non-insulated, positive high voltage. The C12766-12 is UL-recognized per UL 60601-1 as a power supply that can be installed in medical devices.



CE

FEATURES

- High efficiency and less heat generation
- High stability
- Approved to UL 60601-1 Medical Electrical Safety Standard: C12766-12

SPECIFICATIONS

Parameter		C12766-12	C12766-52	Unit
Input voltage (V _{cc})		+24 ± 1.2		V
Input current ①	with no load	Typ.	65	mA
	with full load	Typ.	2.1	A
Specification guaranteed output voltage range ②		-240 to -1500	+240 to +1500	V
Output current		Max.	30	mA
Line regulation against 1.2 V input change ①③		Typ.	±0.01	%
Load regulation against 0 % to 100 % load change ①		Typ.	±0.01	%
Ripple / Noise (p-p) ①③		Typ.	75	mV
Output voltage control (V _{cont})		By external controlling voltage (0 V to +5 V) or external potentiometer (50 kΩ)		—
Controlling voltage input impedance		Typ.	640	kΩ
Reference voltage output (V _{ref})		Typ.	+5.3	V
Output voltage setting (Absolute value)		Typ.	Controlling voltage × 300	V
Output voltage rise time (0 % → 99 %) ①③		Typ.	1500	ms
Temperature coefficient ①③		Typ.	±0.01	%/°C
High voltage monitor output		0 to +5 (Output impedance 10 kΩ)		V
Current monitor output		0 to +5 (Output impedance 10 kΩ)		V
ON / OFF input		TTL positive logic		—
ON / OFF input impedance		30		kΩ
Operating ambient temperature ①③		0 to +50		°C
Operating ambient humidity ④		Below 85		%
Storage temperature		-20 to +60		°C
Storage humidity ④		Below 85		%
Weight		Typ.	290	g
Protective functions		Installed input FUSE ⑤ / Reversed power input protection Overvoltage protection for controlling voltage Output overload protection / Output overvoltage protection (latch stop)		—

NOTE: ① At maximum output voltage

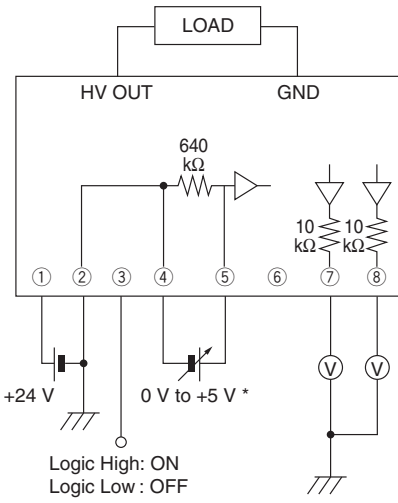
② The voltage from 0 V to -240 V (C12766-52: 0 V to +240 V) can be output but all characteristics are not necessarily satisfied.

③ At maximum output current ④ No condensation ⑤ Not exchangeable

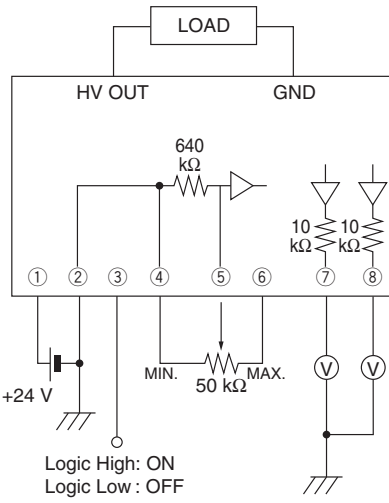
45 W OUTPUT HIGH VOLTAGE POWER SUPPLY C12766 SERIES

Figure 1: Output voltage control

●BY EXTERNAL VOLTAGE



●BY EXTERNAL POTENTIOMETER



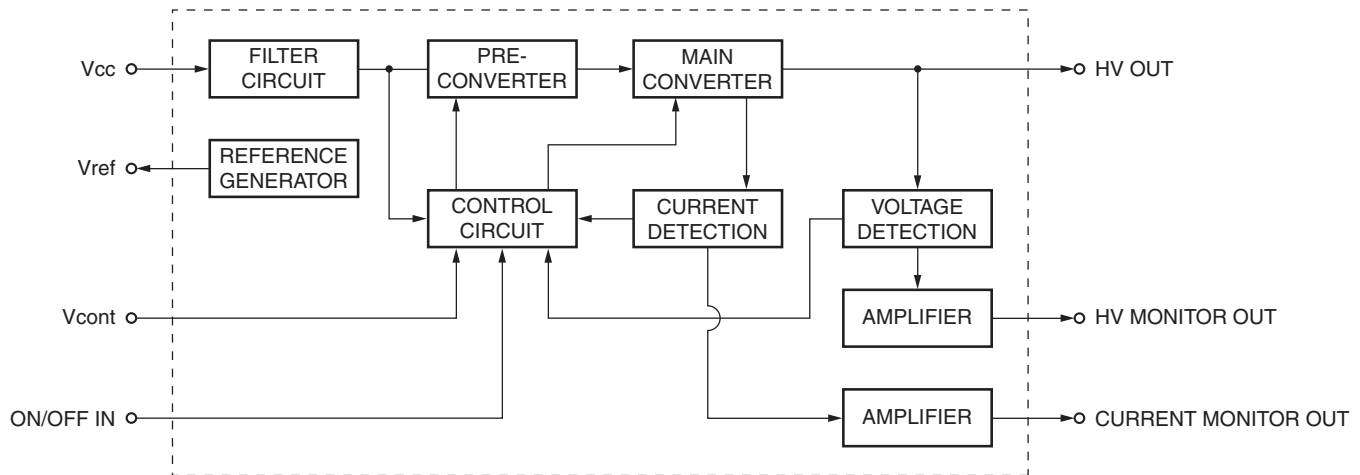
PIN ASSIGNMENT

- ① Vcc IN +24 V
- ② Vcc GND **
- ③ ON / OFF IN
- ④ Vcont GND **
- ⑤ Vcont IN
- ⑥ Vref OUT +5.3 V Typ.
- ⑦ CURRENT MONITOR OUT
- ⑧ HV MONITOR OUT

* The instability in the external controlling voltage should be minimized as it directly affects the output voltage quality.
 ** Never connect the pin number ② and ④ directly and externally.

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Figure 2: Circuit block diagram



TACCC0188EA

Figure 3: Efficiency

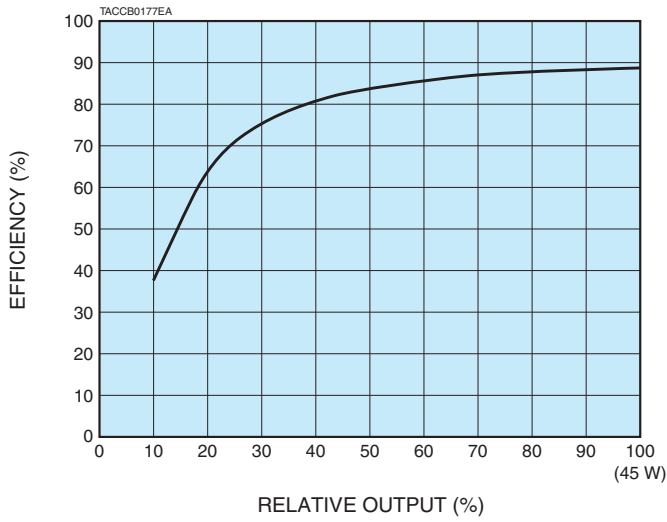


Figure 4: Ripple / Noise

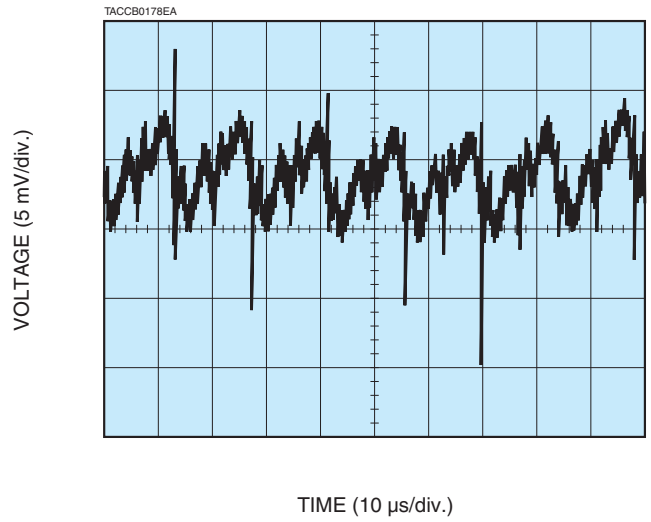


Figure 5: Monitor voltage vs. output voltage

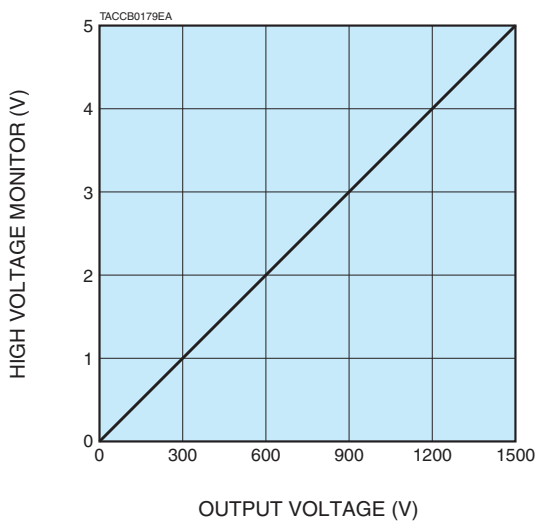
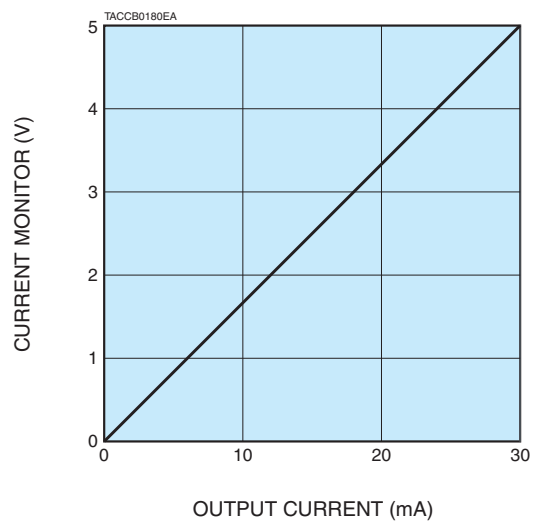


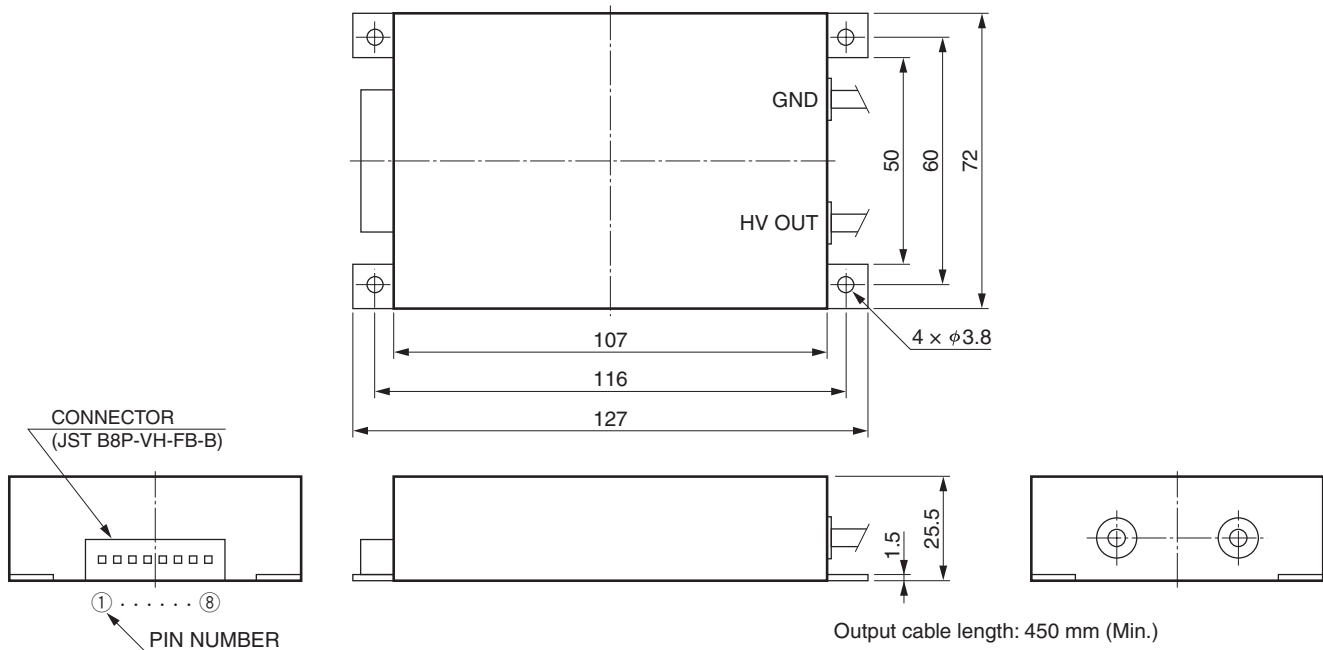
Figure 6: Monitor voltage vs. output current



* These figures indicate nominal characteristics.

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Figure 7: Dimensional outline (Unit: mm)



Accessory (Supplied)
JST HSG VHR-8N
JST CNT BVH-21T-P1.1 (8 pcs)

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