

FBET Hybrid IC
Video Pack (VPH Series)
Video Output Amplifiers For
Extended-Definition TV Projections

The VPH01 is Video Output Amplifier for a Extended-Definition TV Projection integrates a complete amplifier using high-precision FBET and LSBT transistor chips into a single IC, allowing very high-output voltage, wide-bandwidth video output amplifier circuits to be implemented with greatly reduced parts count. The result is that cost reduction and saving board space can be realized. VPH01's 9-pin metal SIP package also minimizes EMI problems and simplifies circuit board design.

The 18MHz bandwidth makes the VPH01 ideally suited for use with 32kHz line frequency EDTV Projection. A supply voltage of 170V is typical.

The VPH01 is one of the devices in a series of Sanyo's IC that cover the complete range of video output amplifier applications - - from EDTV projection to externally ATV/MAC projections. Evaluation samples are available now.

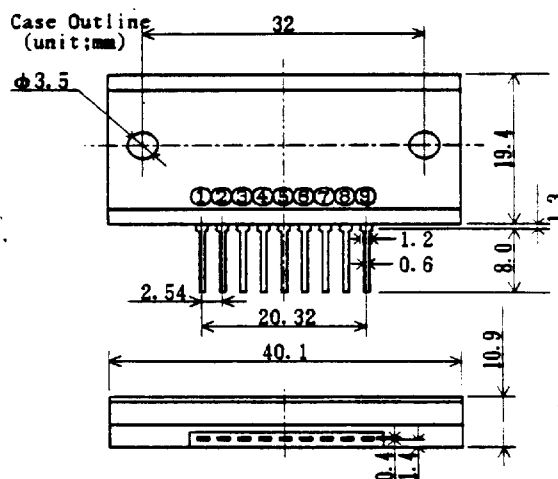
Evaluation samples are available now.
For HDTV-PROJECTION oriented applications, refer to the VPH03 Video output Amplifier System data sheets.

- High performance
- Up to 100Vp-p output voltage
- 18MHz typical bandwidth
- Simplifies circuit design
- Compact package
- Metal casing reduces EMI

Maximum Supply Voltage	VCC VBB
Allowable Power Dissipation	PD (Ta=25°C) PD (Tc=25°C)
Junction Temperature	TJ
Operating Temperature	Ta(op)
Storage Temperature	Tstg

unit
230 V
20 V
3.5 W
20 W
150 °C
85 °C
-20 to 110 °C

Timing diagram for the 74181 ALU showing the sequence of operations for the expression $(A + B) * C$. The diagram shows signals for V, G, E, I, N, O, D, C, and U over 9 clock cycles. A large triangle indicates the ALU output, which is the result of the operation.



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VPH01 (Video Pack)

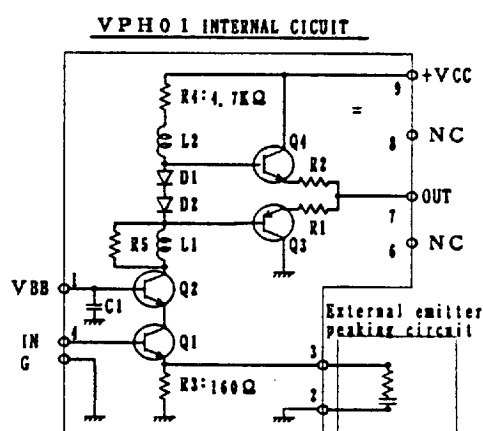
Recommended Operating Conditions at Ta=25°C

Condition 1	VCC	Vout ~100Vp-p Vin(DC)=3.1V	unit
	VBB		150 V
Condition 2	VCC	Vout ~150Vp-p Vin(DC)=4.1V	200 V
	VBB		12 V

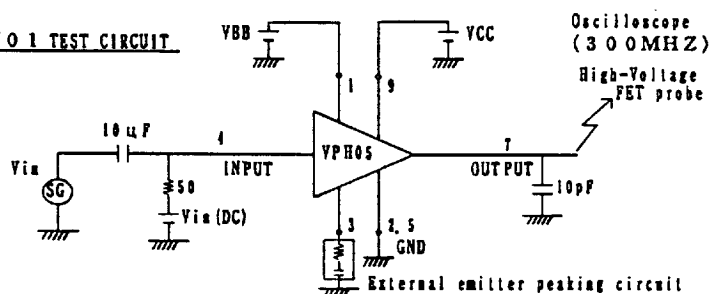
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Frequency Bandwidth	Fc(-3dB)	Condition 1	Vout=100Vp-p	15	18	MHz
		Condition 2	Vout=150Vp-p	13	15	MHz
Voltage Gain	VG(DC)		26	29	32	times
Current Dissipation	ICC(1)	Condition 1	f=10 MHz clock	29		mA
	ICC(2)	Condition 1	f=18 MHz clock	35		mA
	ICC(3)	Condition 2	f=10 MHz clock	43		mA
	ICC(4)	Condition 2	f=15 MHz clock	47		mA

Equivalent Circuit



VPH01 TEST CIRCUIT



Precautions

- 1) Do not short the pins, or degradation may occur.
- 2) On heat sink design and test board condition, refer to the technical document "Sanyo Video Pack".
- 3) Case is connected to the internal GND.
- 4) The mounting torque should be in the range of 4 to 5Kg·cm

VPH01

