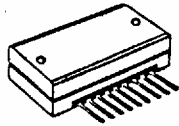


# SANYO



## VPH01

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

### Overview

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.

For HDTV-PROJECTION oriented applications, refer to the VPH03 Video output Amplifier System data sheets.

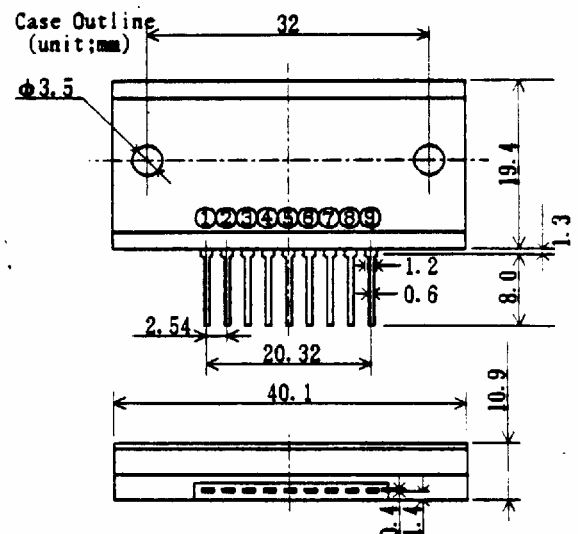
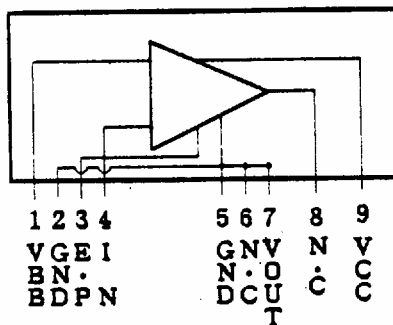
### Features

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

### Absolute Maximum Ratings at Ta=25°C

		unit
Maximum Supply Voltage	VCC	230 V
	VBB	20 V
Allowable Power Dissipation	PD (Ta=25°C)	3.5 W
	PD (Tc=25°C)	20 W
Junction Temperature	TJ	150 °C
Operating Temperature	Ta(op)	85 °C
Storage Temperature	Tstg	-20 to 110 °C

### Connection and Outline



Specifications and information herein are subject to change without notice.

**SANYO Electric Co., Ltd. Semiconductor Overseas Marketing Div.**  
Natsume Bldg., 18-6, 2-chome, Yushima, Bunkyo-ku, TOKYO 113 JAPAN.

## VPH01 (Video Pack)

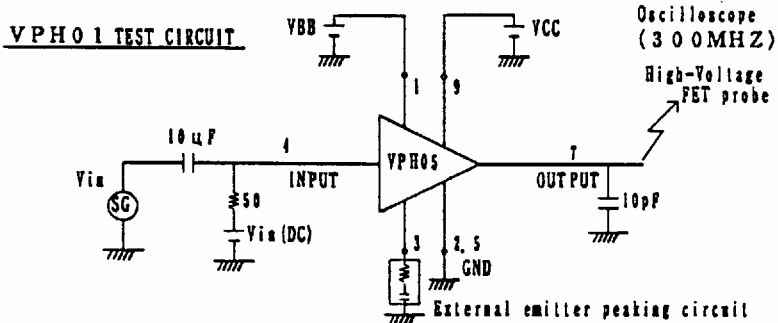
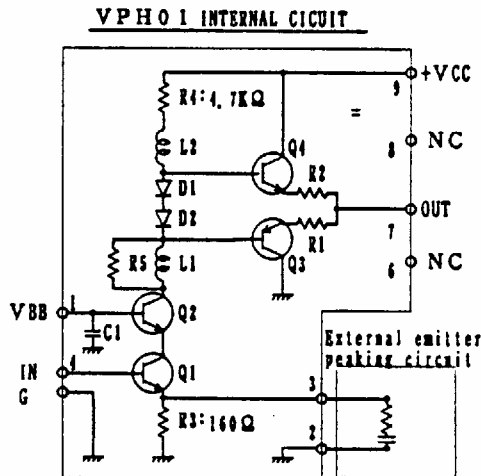
### Recommended Operating Conditions at Ta=25°C

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

### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Condition	Vout	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



### 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 6Kg·cm

