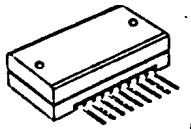
SANYO



NEW PRODUCT VPH03

FBET Hybrid IC
Video Pack (VPH Series)
High-Definition·TV Video Output Amplifier

Overview

The VPH03 is Video Output Amplifier for High-Definition TV 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 cost reduction and saving board space can be realized. VPH03's 9-pin metal SIP package also minimizes EMI problems and simplifies circuit board design.
The 30MHz bandwidth makes the VPH03 ideally suited for use in 32kHZ line frequency HDTV. A supply voltage of 150V is typical.
The VPH03 is one of the devices in a series of Sanyo IC's that cover the complete range of video output amplifier applications - - from Next generation HDTV to externally High resolution TV.
Evaluation samples are available near feature.
For EDTV/ATV/MAC Projection applications, refer to the VPH01 Video output Amplifier system data sheets. and HDTV & Graphics Projection oriented use applications is VPH05 Video Output Amplifier.

Features

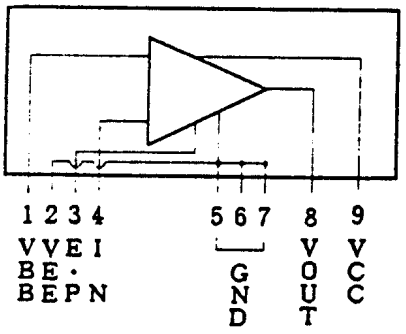
- High performance
- Up to 100Vp-p output voltage
- 50MHz typical bandwidth
- Simplifies circuit design
- Compact package
- Metal casing reduces EMI

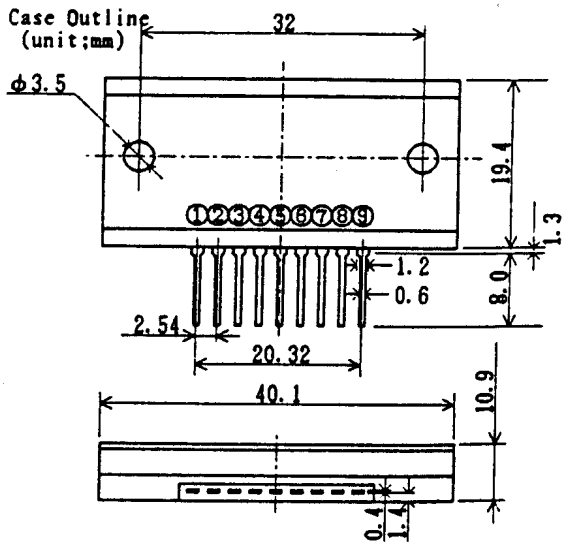
TENTATIVE

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.

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Recommended Operating Conditions at Ta=25°C

			unit
Condition 1	VCC	Vout ~100Vp-p	150 V
	VBB	Vin(DC)=3.3V	12 V
Condition 2	VCC	Vout ~150Vp-p	200 V
	VBB	Vin(DC)=4.3V	12 V

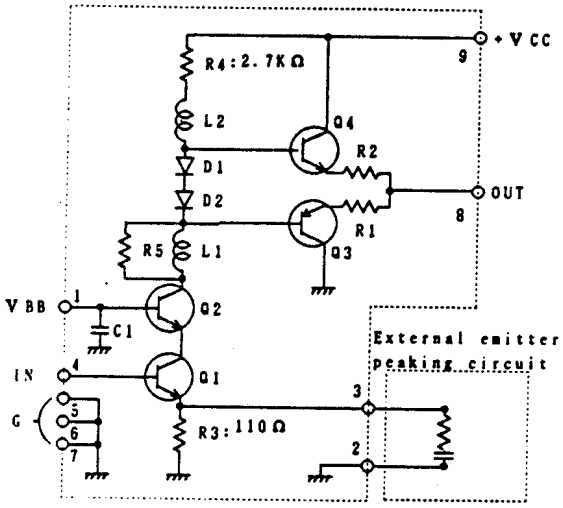
Electrical Characteristics at Ta=25°C

				min	typ	max	unit
Frequency Bandwidth	fc(-3dB)	Condition 1	Vout=100Vp-p	27	30		MHz
		Condition 2	Vout=150Vp-p	25	27		MHz
Voltage Gain	VG(DC)			26	29	32	times
Current Dissipation	ICC(1)	Condition 1	f=10 MHz clock		40		mA
	ICC(2)	Condition 1	f=30 MHz clock		57		mA
	ICC(3)	Condition 2	f=10 MHz clock		57		mA
	ICC(4)	Condition 2	f=30 MHz clock		82		mA

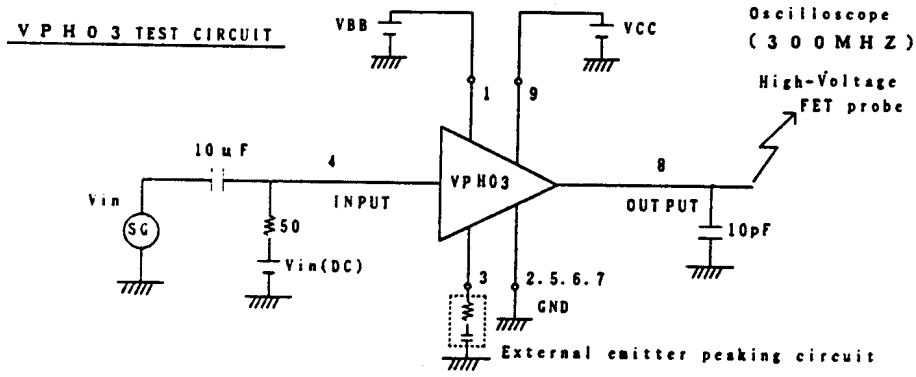
(Note) Under Test Board Condition
- Emitter peaking: Re=68Ω, Ce=150PF
- C Load : 10PF

Equivalent Circut

VPH03 INTERNAL CICUIT



VPH03 TEST CIRCUIT



Precautions

1) Do not short the pins, or degradation may occur.
2) In 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/cm²