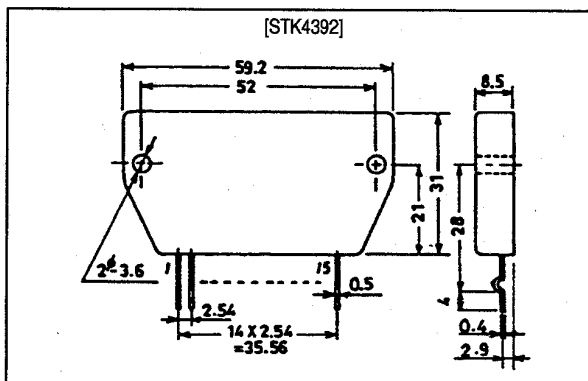


**SANYO****STK4392****AF Power Amplifier**  
**(15W + 15W min, THD = 1.0%)****Features**

- Small and slim package with 31mm height.
- Capable of guaranteeing substrate temperature 125°C, thereby reducing heat sink.
- Excellent cost performance.

**Package Dimensions**

unit: mm

**4033****Specifications****Maximum Ratings** at  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$	Pin 4 to 7, 12	56	V
Thermal resistance	$\theta_{j-c}$	One power transistor	5	$^\circ\text{C/W}$
Junction temperature	$T_J$		150	$^\circ\text{C}$
Operating substrate temperature	$T_c$		125	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-30 to +125	$^\circ\text{C}$
Available time for load short-circuit	$t_s$	$V_{CC} = 39\text{V}$ , $R_L = 8\Omega$ , $P_O = 15\text{W}$ , $f = 50\text{Hz}$	2	s

**Recommended Operating Conditions** at  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC}$		39	V
Load resistance	$R_L$		8	$\Omega$

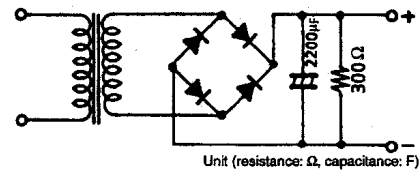
**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

**Operating Characteristics** at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = 39\text{V}$ ,  $R_L = 8\Omega$ ,  $R_g = 600\Omega$ ,  $V_G = 40\text{dB}$ , at specified test circuit (based on application circuit example).

Parameter	Symbol	Conditions	min	typ	max	Unit
Quiescent current	$I_{CCO}$	$V_{CC} = 47\text{V}$	20	60	120	mA
Output power	$P_{O(1)}$	THD = 1.0%, $f = 1\text{kHz}$	15			W
	$P_{O(2)}$	THD = 1.0%, $f = 30\text{Hz to } 20\text{kHz}$	7.5			W
Total harmonic distortion	THD	$P_O = 0.1\text{W}$ , $f = 1\text{kHz}$			0.3	%
Frequency characteristic	$f_L, f_H$	$P_O = 0.1\text{W}$ , $+0$ $-3\text{ dB}$		20 to 100k		Hz
Input impedance	$r_i$	$P_O = 0.1\text{W}$ , $f = 1\text{kHz}$		110k		$\Omega$
Output noise voltage	$V_{NO}$	$V_{CC} = 47\text{V}$ , $R_g = 10\text{k}\Omega$			0.8	mVrms

Notes. Unless otherwise specified for the power supply at the time of test, use the constant voltage power supply.  
When testing the available time for load short-circuit, use the specified transformer as shown right.  
The output noise voltage is the peak value on the mean value indicating rms reading (VTVM), and should not involve impulse noise.



Specified Transformer Power Supply  
(Equivalent to RP-22)

## Equivalent Circuit

