



No. 1640

**STK7406**

Thick Film Hybrid IC

**OFFLINE SWITCHING REGULATOR****Features**

- Switching regulator power IC fabricated using Sanyo's original IMST (Insulated Metal Substrate Technology)
- Single-package, selectorless regulated power supply applicable to a wide range of line voltages from 85VAC to 264VAC
- Sanyo's original circuit configuration requiring neither driver transformer nor bulky choke coil, providing high efficiency, small size, and light weight.
- The STK7400 series are available for output power from 5W to 100W. They have 16 pins and are pin-compatible.
- Designed to meet the requirements of safety standards and radio interference control standards now in force in various countries. For conducted interference through input, it is easy to make low-noise design because the IC metal substrate serves as shielding.
- Easy to constitute multi-output
- Built-in overcurrent protector
- Remote ON/OFF control pin connectable

**Functions**

Pulse width modulator, oscillator, control, error amp

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

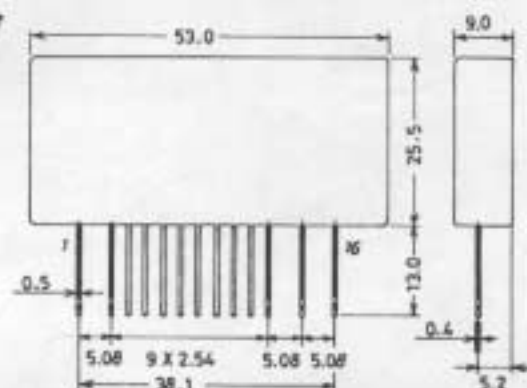
				unit
Maximum Pin Voltage	V16max	Pin 16, TR5 base bias -6V	800	Vpk
	V11max	Pin 11	-12	V
	V10max	Pin 10	12	V
	V1max	Pin 1, TR1 base bias -1V	400	V
Maximum Pin Current	I16max	Pin 16	3.0	Apk
	I10max	Pin 10	1.0	Apk
	I1max	Pin 1	100	mA
Operating Case Temperature	Tcmax		85	$^{\circ}\text{C}$
Storage Temperature	Tstg		-30 to +100	$^{\circ}\text{C}$

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

	unit
Recommended Supply Voltage $V_{CC}$	280 V

**Case Outline 4057  
(unit:mm)**

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These specifications are subject to change without notice.

# STK7406

## Operating Characteristics at $T_a=25^{\circ}\text{C}$

			min	typ	max	unit
TR5 Current Amplification Factor	$h_{FE5}$	$V_{CE}=5\text{V}, I_C=3\text{A}$	8			
TR1 Current Amplification Factor	$h_{FE1}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	60			
ZD Zener Voltage	$V_{z1}$	$I_z=5\text{mA}$		8.0		V
ZD Zener Voltage	$V_{z2}$	$I_z=5\text{mA}$		7.5		V
Oscillation Frequency	$f_{osc}$			33k		Hz

## Equivalent Circuit and Functional Block Diagram

