

STR5A450D Series

■ Features

Downsized, Low Cost, Low Power Consumption

- Built-in startup circuit (automatically turn off after startup, zero power consumption)
- Built in power MOSFET of 650 V
- Built-in error amplifier

High Efficiency in All Load Ranges

- Automatically switch the operation mode according to the load
 - Heavy load: frequency fixed, 60 kHz
 - Medium load: green mode, 23 kHz to 60 kHz
 - Light load: burst oscillation operation

Supporting Various Applications

- Buck converter
- Inverting converter

Highly Stable Control

- Current mode PWM control
- Leading edge blanking function

Low Noise

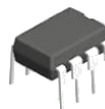
- Soft start function (reduces stresses on parts)
- Random switching function

Providing Highly Reliable Circuits by Various Protections

- Overload protection (OLP): auto-restart
- Overvoltage protection (OVP): auto-restart
- Thermal shutdown (TSD) with hysteresis: auto-restart

■ Selection Guide

DIP8



Bare lead frame: Pb-free (RoHS compliant)

Part Number	$R_{DS(ON)}$ (max.)	I_{OUT}^* (max.)
STR5A451D	4.0 Ω	0.7 A
STR5A453D	1.9 Ω	0.9 A

*Universal, open frame, $V_{OUT}=24V$

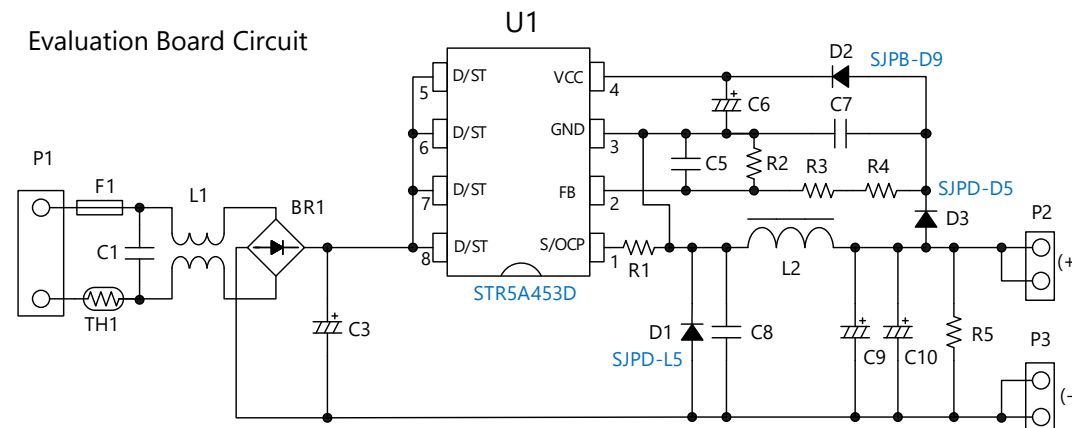
■ Evaluation Board

We also provide an evaluation board for a buck converter of 10.5 W (15 V / 0.7 A) using STR5A453D.



53 mm × 118.5 mm

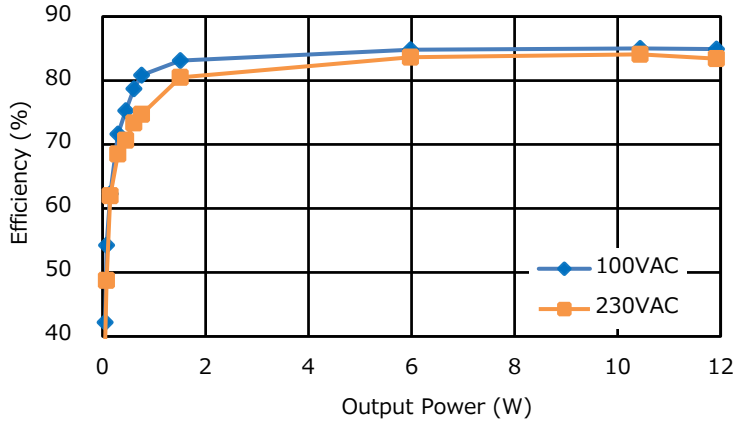
Evaluation Board Circuit



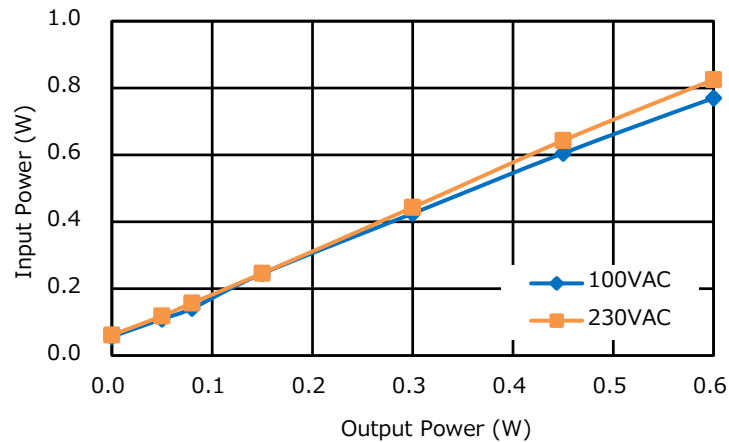
STR5A450 Series

Evaluation Board Characteristics

◆ Efficiency (In All Load Ranges)



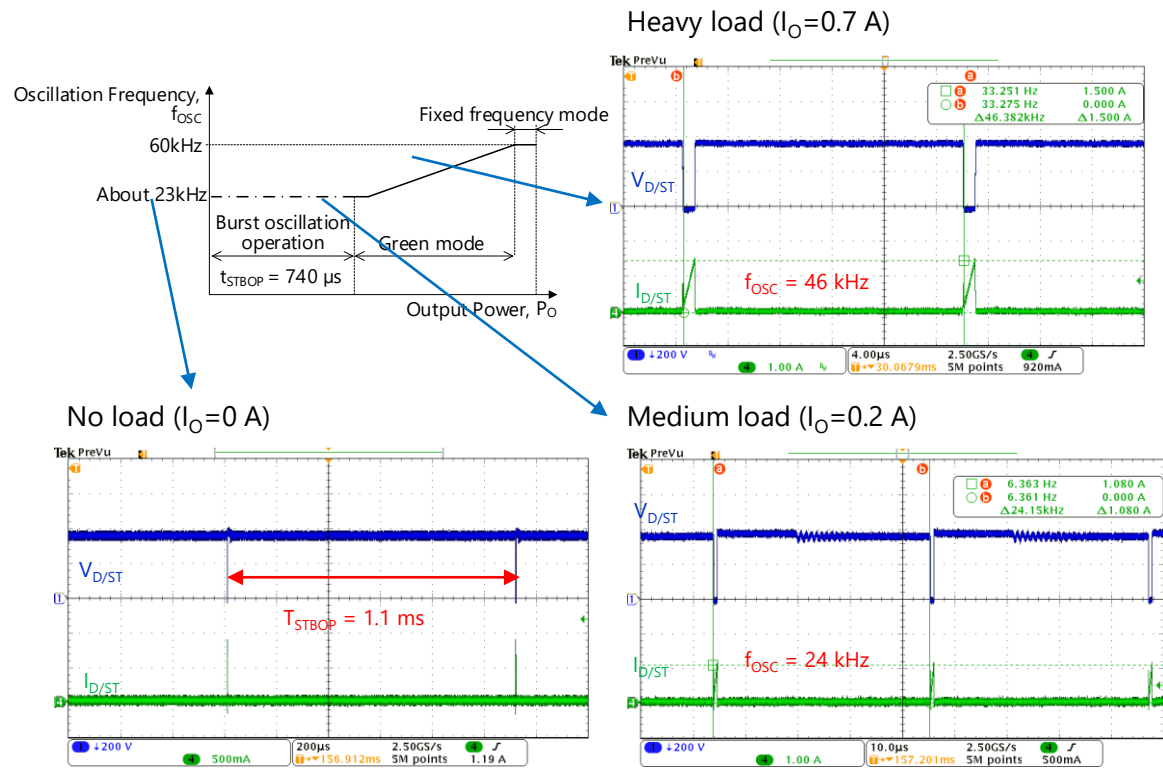
◆ Standby Power



◆ Input Power at No Load

Input Voltage	Input Power
100 VAC	54.1 mW
230 VAC	62.3 mW

◆ Operational Waveforms ($V_{IN}=265$ VAC)



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