

STR3A400 Series

■ Features

Downsized, 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

- Step drive control (lower V_F of secondary-side rectifier diode)
- Automatically switch the operation mode according to the load
 - Heavy load: frequency fixed, 65 kHz
 - Medium load: green mode, 30 kHz to 65 kHz
 - Light load: burst oscillation operation

Highly Stable Control

- Current mode PWM control
- Leading edge blanking function
- Excellent load regulation

Low Noise

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

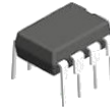
Providing Highly Reliable Circuits by Various Protections

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

■ Selection Guide

Bare lead frame: Pb-free (RoHS compliant)

DIP8



| Part Number | $R_{DS(ON)}$ (max.) | P_{OUT}^* | Operation of OVP, TSD |
|-------------|---------------------|-------------|-----------------------|
| STR3A451 | 4.0 Ω | 23 W | Latch |
| STR3A451D | | | Auto-restart |
| STR3A453 | 1.9 Ω | 35 W | Latch |
| STR3A453D | | | Auto-restart |
| STR3A455 | 1.1 Ω | 44 W | Latch |
| STR3A455D | | | Auto-restart |

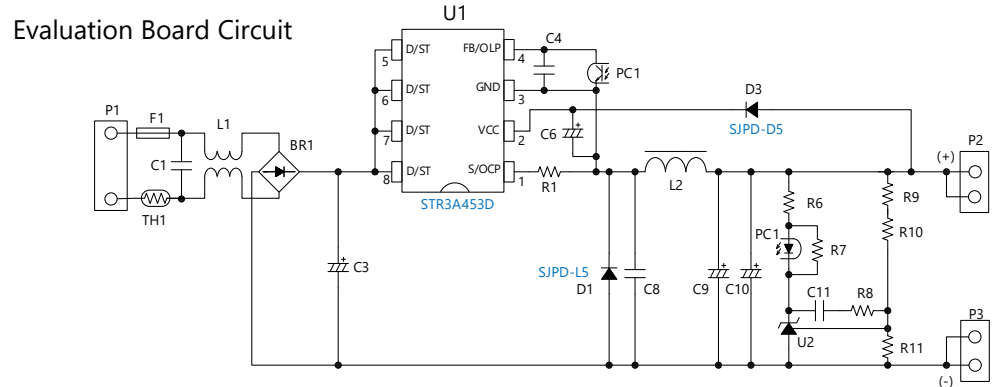
■ Evaluation Board

*Universal, open frame

We also provide an evaluation board for a non-isolated buck converter of 10.5 V (15 V / 0.7 A) using STR3A453D.

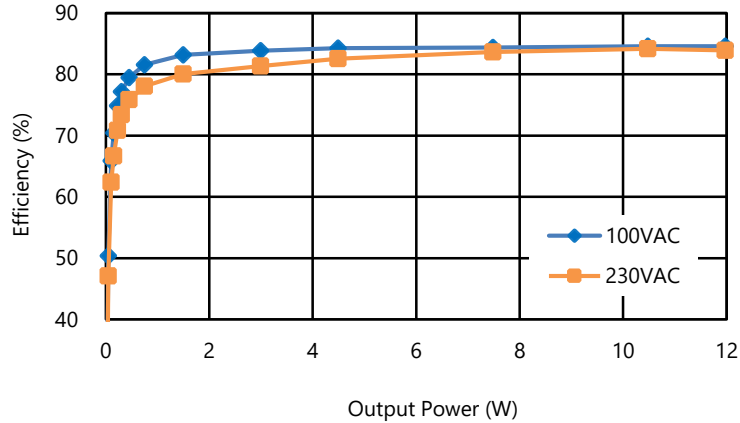


53 mm × 118.5 mm

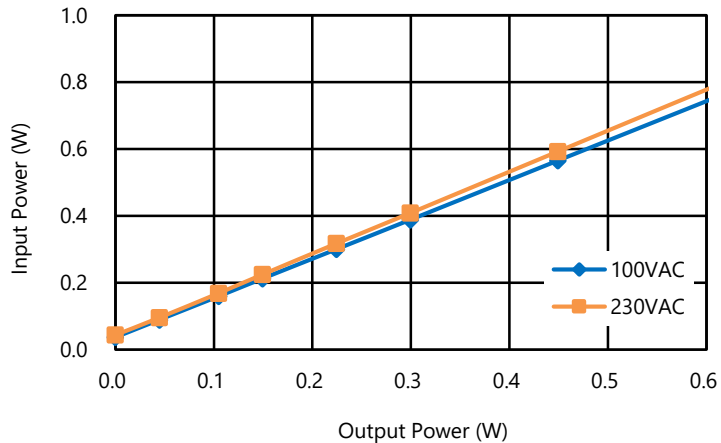


Evaluation Board Characteristics

◆ Efficiency (In All Load Ranges)



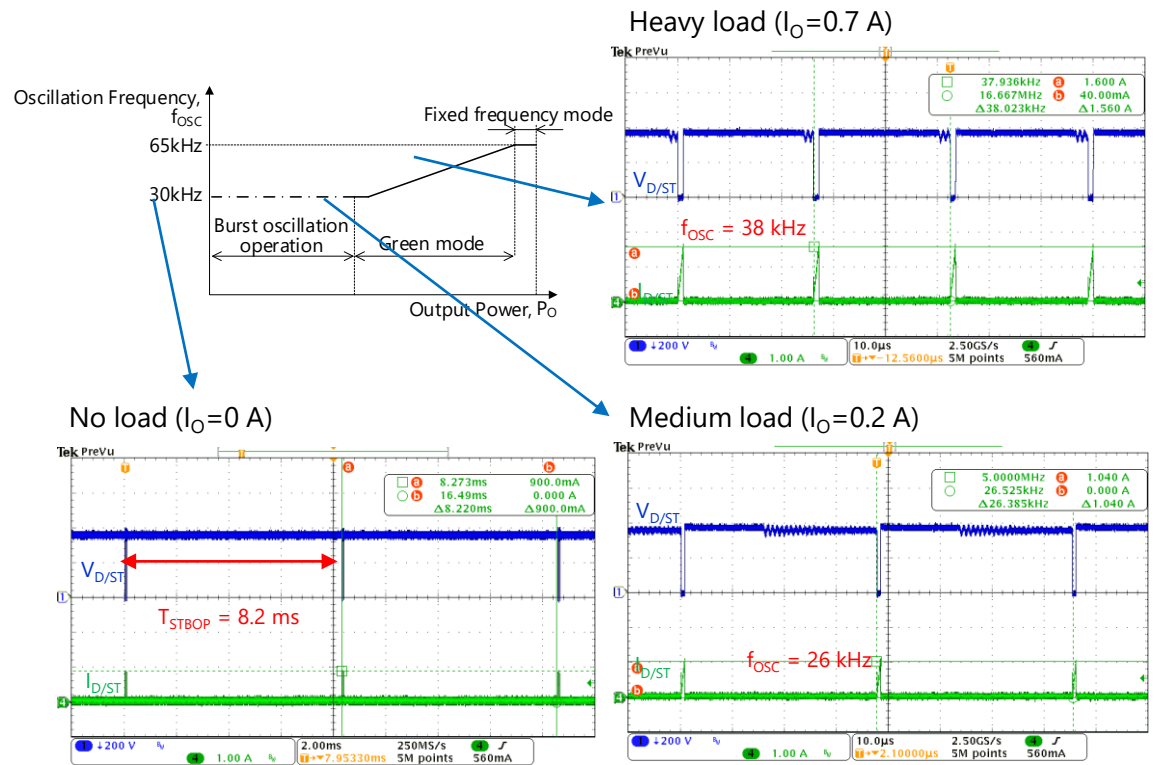
◆ Standby Power



◆ Input Power at No Load

| Input Voltage | Input Power |
|---------------|-------------|
| 100 VAC | 36.4 mW |
| 230 VAC | 42.8 mW |

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



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