

Product Brief

Features

- Pulse-by-Pulse Current Limiting
- Burst Mode Operation for Stand-by Mode
- Improved SenseFET (QFET)
- Fixed Operating Frequency of 70kHz
- Over Current Latch Protection (OCP)
- Over Load Protection (OLP)
- Over Voltage Protection (OVP)
- Internal Thermal Shutdown Protection (TSD)
- Under Voltage Lockout with Hysteresis
- User-Defined Soft Start
- Auto-Restart Mode

Applications

- LCD Monitor
- AC/DC Adapters

Ordering Information

Part Number	Pin max (W)	BVdss (V)	Ipeak typ (A)	Rds(on) typ (Ω)	Package
FS6M07652RTC-TU	45	650	2.0	1.6 (Id = 3.5A)	TO-220F-5L
FS6M07652RTC-YDT					

-TU: Non Forming Type -YDT: Forming Type

Various Protection Features — includes OLP, OVP, OCP & TSD

Burst Mode Operation — Lower Consumption in Standby Mode

General Description

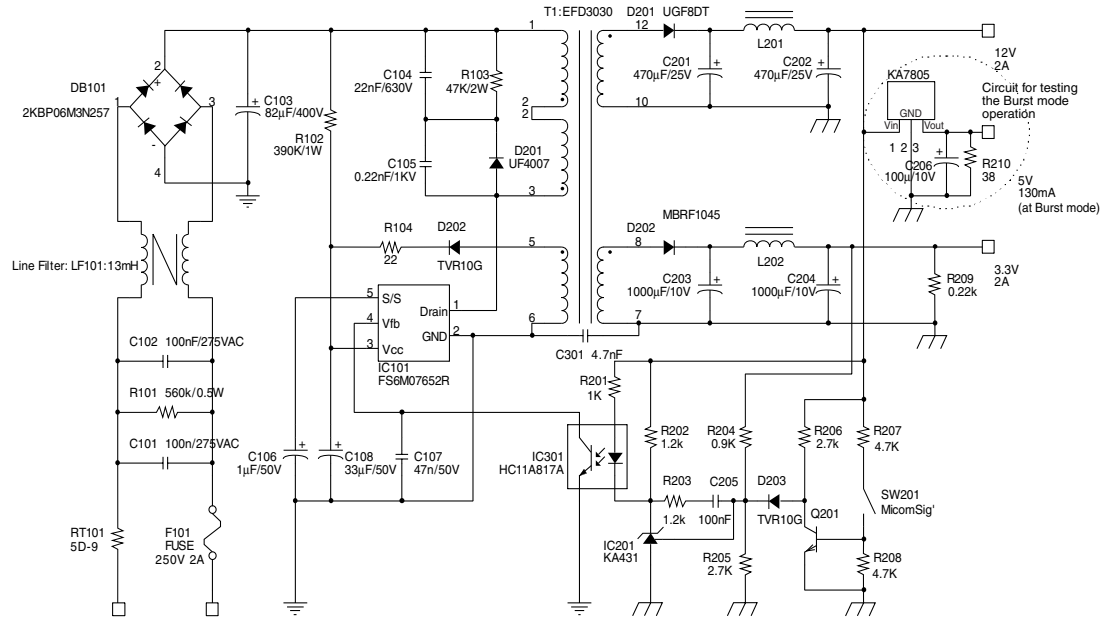
The FS6M07652RTC is a highly integrated off-line power switch (FPS) specifically targeted for the LCD monitor fly-back power supply applications. This offers Burst Mode Operation for Stand-by mode to minimize power consumption by reducing switching loss. The FS6M07652RTC minimizes external components, simplifies design and lower cost by integrating a current sensing MOSFET and a PWM controller with a fixed operating frequency of 70kHz.

The FS6M07652RTC provides internal protection including over voltage protection, over load protection, thermal shutdown protection and over current protection. The internal current sensing high voltage MOSFET offers a 650V min. breakdown rating.

The FS6M07652RTC is available in the space-saving TO-220-5L package.

FS6M07652RTC

Typical Circuit



Electrical Characteristics

Product Parameter		Fairchild FS6M07652RTC	Competitor
FET		SenseFET (QFET)	MOSFET (CoolMOS)
Isense		Internal	External
Pkg Type		TO-220F-5L	P-DIP-8-6
Pin		5 pin: Drain/GND/Vcc/Vfb/Vss	6 pin: Drain/GND/Vcc/Vfb/Vss/Isense
Frequency		Fixed Frequency 70kHz	Fixed Frequency 100kHz
Protection	Auto restart mode	Over Voltage Protection (33V) Over Load Protection (7.5V/Idelay = 4μA) Over Current Latch (Vth = 2V)	Overload & Open Loop Protection (Vfb = 4.8V & Vss = 5.3V) Overvoltage Protection (Vcc = 16.5V & Vss = 4.0) Thermal Shutdown (Typ. 140°C)
	Latch Mode	Thermal Shutdown (Typ. 160°C)	—
UVLO		9~15V (Hysteresis: 6V)	8.5~13.5V (Hysteresis: 5V)
Start Up Current		Max. 170μA	Max 55μA
Max Duty		Typ. 80%	Typ. 72%
Peak Current Limit, Breakdown Voltage & Rdson		FS6M07652RTC: 2.0A/1.3/650V FS6M12653RTC: 3.2A/.073/650V	ICE2A165: 1.0A/3.0/650 ICE2A265: 2.0A/1.1/650 ICE2A365: 3.0A/0.5/650 ICE2A180: 1.0A/3.0/800 ICE2A280: 2.0A/0.9/800
Stand by Mode		Burst mode operating (f = 70kHz/Ipeak = 0.5A)	Frequency Reduction (f = 21kHz)
Soft Start		External	External
Leading Edge Blanking		Internal R-C	Internal (200ns)

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- A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.