To learn more about ON Semiconductor, please visit our website at
www.onsemi.com

Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will b yit-ogoe5o3t

July 2014

FLS3217 / FLS3247
Single-Stage PFC Primary-Side-Regulation Offline LED Driver with Integrated Power MOSFET

Features

- Cost-Effective Solution without Input Bulk Capacitor and Feedback Circuitry
- Power-Factor Correction (PFC)
- Integrated Power MOSFET
- Accurate Constant-Current (CC) Control Independent Online Voltage, Output Voltage, and Magnetizing Inductance Variation

Marking Information

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only.

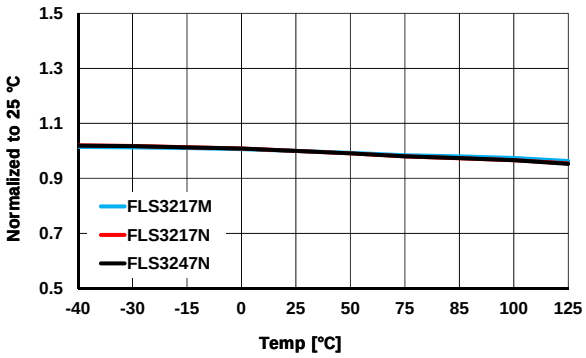
Electrical Characteristics

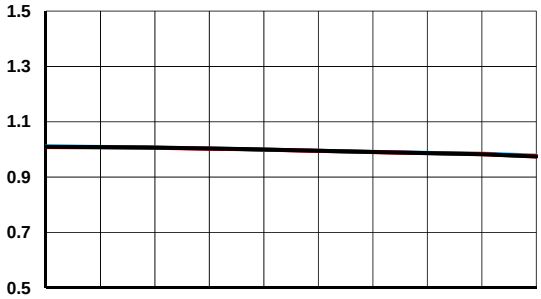
Unless otherwise specified, V_{DD}=15 V and T_A=25°C.

Electrical Characteristics (Continued)

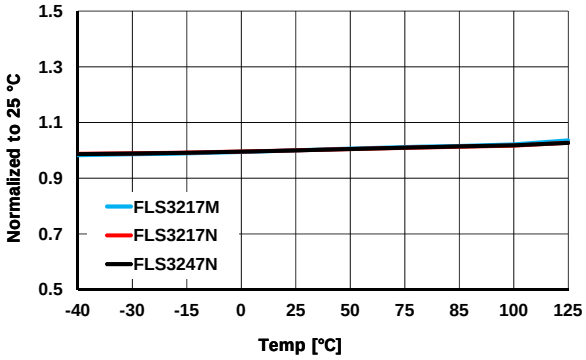
Unless otherwise specified, V_{DD}

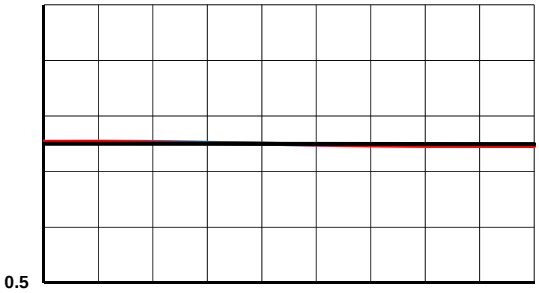
Typical Performance Characteristics





Typical Performance Characteristics (Continued)



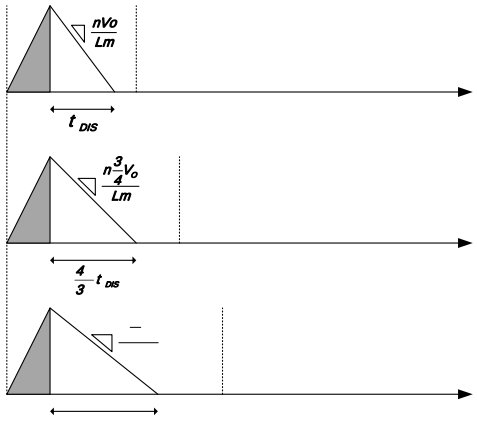


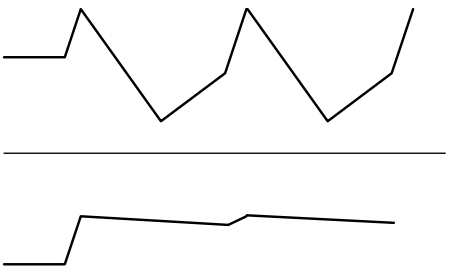
Functional Description

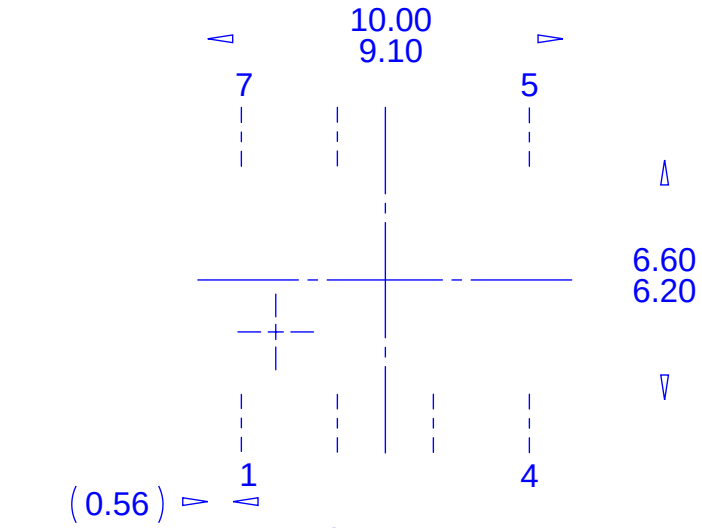
FLS3217 / FLS3247 is an AC-DC PWM controller for LED lighting applications. TRUECURRENT® techniques regulate accurate LED current independent of input voltage, output voltage, and magnetizing inductance variations. The linear frequency control in the oscillator reduces conduction loss and maintains DCM operation in the wide range of output voltage, which implements high power factor correction in a single-stage flyback topology. A variety of protections, such as short/open-LED protection, over-temperature protection, and cycle-by-cycle current limitation stabilize system operation and protect external components.

Startup

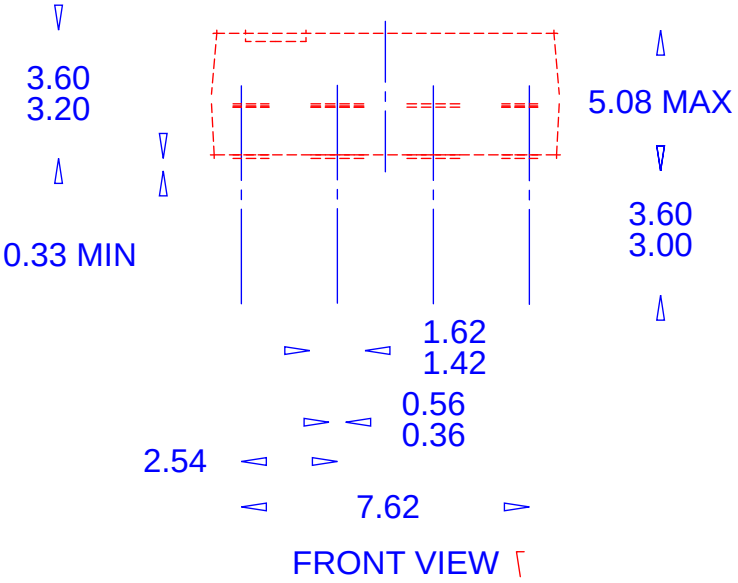
Powering at startup is slow due to the low feedback-loop bandwidth in the PFC converter. To increase power during startup, the internal oscillator counts 12ms to define Startup Mode. During Startup Mode, turn-on time is determined by current-mode control with 0.2V voltage limit. Transconductance becomes 14 times bigger, as


nVo
Lm
t DIS
n 3/4 Vo
Lm
4/3 t DIS

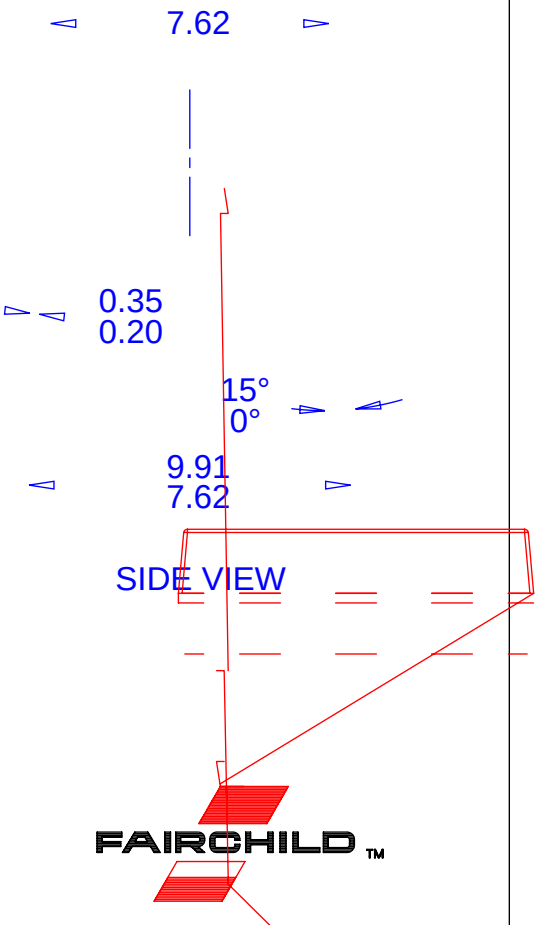




TOP VIEW



FRONT VIEW

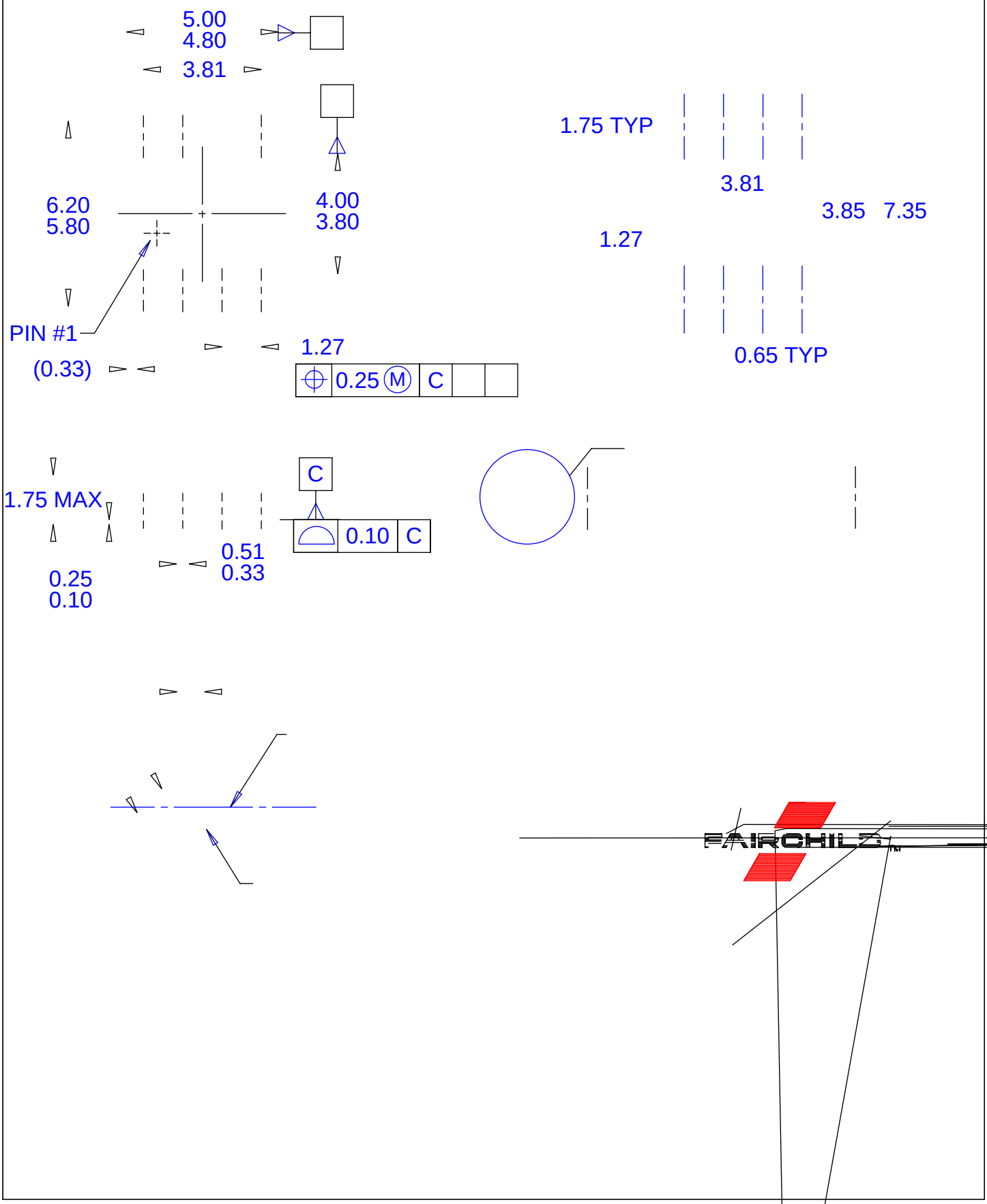


SIDE VIEW

NOTES: UNLESS OTHERWISE SPECIFIED

A. THIS PACKAGE COMPLIES TO JEDEC MS-001, VARIATION BA, EXCEPT FOR TERMINAL COUNT (7 RATHER THAN 8)
B. ALL DIMENSIONS ARE IN MILLIMETERS
C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS.
D. DIMENSIONS AND TOLERANCES PER ASME Y14.5M-2009
E. DRAWING FILENAME: MKT-NA07BArev3

FAIRCHILD ™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4.80
3.81
6.20
5.80
4.00
3.80
PIN #1
(0.33)
1.27
0.25 M C
1.75 TYP
3.81
3.85
7.35
1.27
0.65 TYP
1.75 MAX
C
0.10 C
0.51
0.33
0.25
0.10
FAIRCHILD