



**INDUSTRIAL  
AND SPM  
MOTION  
MODULES**

**AUTOMOTIVE  
IGNITION IGBT**

**MOBILE  
DEVICES**

USB – C CONTROLLER &  
DIGITALLY  
CONTROLLED TINY  
BUCK REGULATOR

**LED Lighting  
PSR Solutions**

## NEW PRODUCT INTRODUCTOIN NEWSLETTER

**JULY 2015**

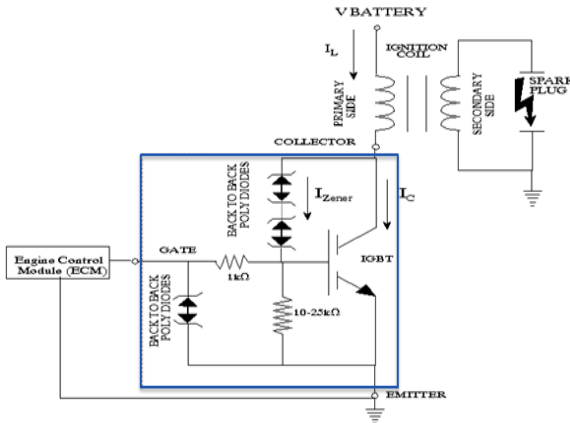
Category	Prod ID	Product Description
Ignition IGBT	FGD3325G2_F085	EcoSPARK®2 330mJ, 250V, N-Channel Ignition IGBT, DPak <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
Automotive Qualified FS Trench IGBT	FGH60N60UFDTU_F085	600 V, 60 A Field Stop Trench IGBT, TO247 <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
N Channel FET	FCH041N60F_F085	N Channel, SuperFETII, FREDFET, 650V, 76A, 41mOhms TO247 Package <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FDD86367_F085	N Channel Power Trench MosFET 80V, 100A, 4.2mOhms DPAK Package <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FCPF290N80	N-Channel SuperFET® II MOSFET, 800V, 17A, 290mOhm TO220F Package <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FDBL0330N80	N-Channel PowerTrench® MOSFET, 80V, 220A, 3.0mOhm, TO-LL (MO299) <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
FS Trench IGBT's	FGA6065ADF	650 V, 60 A Field Stop Trench IGBT, TO3PN <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FGH40T120SMDL4	1200V, 40A FS Trench IGBT with Kelvin Connection, 4 Lead TO247 <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
Industrial and Motion Control Modules (SPM2, F2, SPM45)	FPF2G120BF07AS	SPM® 2 Series Module , 3 Channel Boost Module with NTC <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FPF2G120BF07ASP	F2 Press-fit module, 3 Channel Boost module with NTC + PCM (phase change material) <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FSB43004A	Motion SPM® 45 Series, 40 V, RDS(ON)=3.0 mΩ(max.) 3-phase MOSFET Inverter Module Including Control IC for Gate Drive and Protection. <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
Digitally Controlled Buck Regulator	FAN53202UC23X	FAN53202 5 A, 2.4 MHz, Digitally Programmable TinyBuck® Regulator <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
USB - Type C Controller	FUSB300CUCX	Programmable USB Type-C Controller <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
Lighting IC's	FL6630MX	Single-Stage Primary-Side-Regulation PWM Controller for PFC and LED Dimmable Driving <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FL6632MX	Primary-Side-Regulated LED Driver with Power Factor Correction <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>
	FL663MX	Primary-Side-Regulation PWM Controller for LED Illumination <a href="#">Order Samples</a> <a href="#">Download Data Sheet</a>



ADDITIONS TO REGISTER-ABLE PRODUCTS LIST

Automotive

**FGD3325G2F085 EcoSPARK®2** is a 250V, N-Channel Ignition IGBT , DPak



**Discrete Ignition IGBT**

- 200 to 500mJ SCIS
- 250 to 500V Clamp
- EcoSPARK®1
- EcoSPARK®2
- Die, Wafer, and Packaged

Fairchild is a leading supplier of Ignition IGBT's to Automotive OEM's .

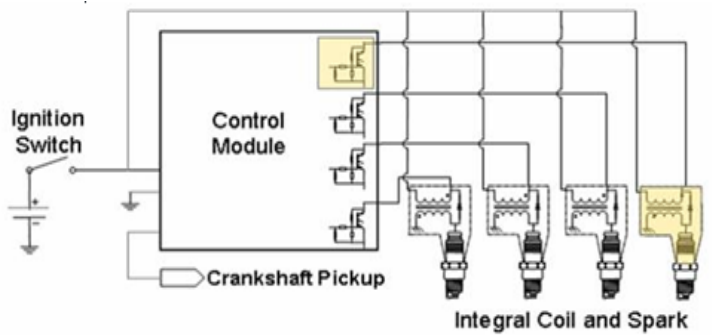
**Key Features:**

- ✓ SCIS Energy = 330mJ at  $T_J = 250C$
- ✓ Logic Level Gate Drive
- ✓ Qualified to AEC Q101
- ✓ RoHS Compliant Applications
- ✓ **Automotive Ignition Coil Driver Circuits for Coil On Plug Applications**

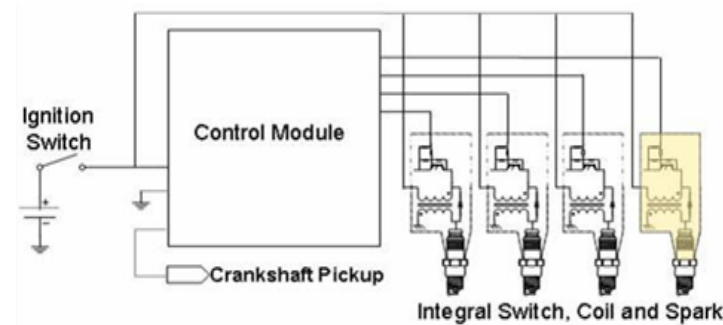
Ignition IGBT – Application Circuit

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Visit Automotive Ignition IGBT Selection Guide



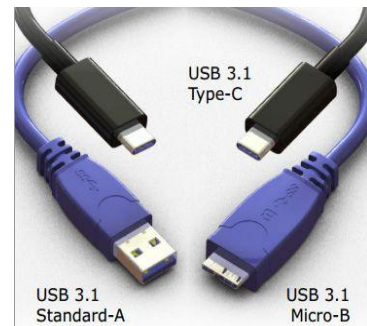
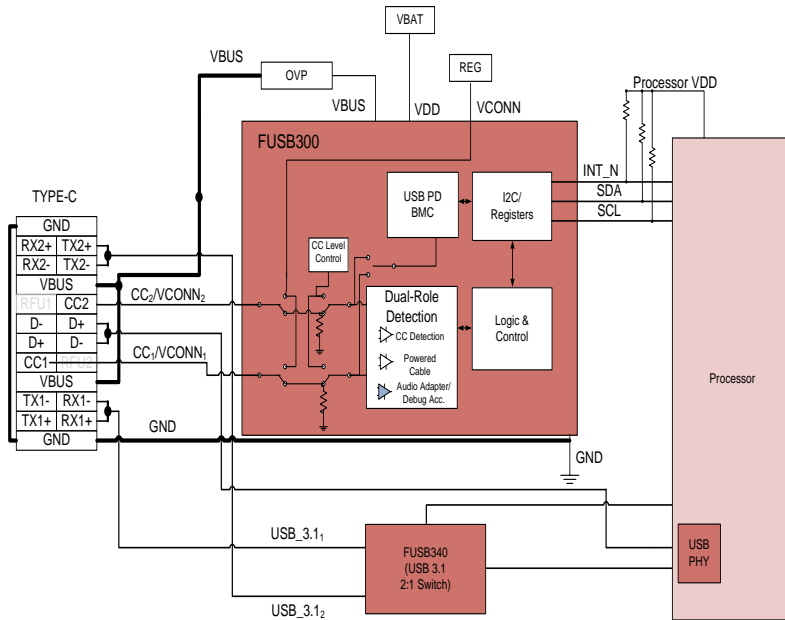
ECU based Ignition Electronics



“Switch on Coil”  
 „Pencil Coil“  
 „Plug-Top“



## FUSB300C Programmable USB Type-C Controller



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[Download Data Sheet](#)

**FUSB300C** is a flexible, thin client solution for USB Type-C control. The FUSB300C hardware solution enables system designers the ability to implement a DRP/DFP/UFP USB Type-C connector while also providing the software flexibility for multiple platform support. This flexible USB Type-C Interface Detection and Orientation Configuration are based on proven IP.

### Features

- ✓ Type-C Detection of Attach and Orientation
- ✓ Automated Vbus threshold Detection as well as various Charging current level
- ✓ Integrated VCONN power switch
- ✓ Flexible Multi-platform support through I2C Programmability
- ✓ Supports: Dual Role Port (DRP), Downstream Facing Port (DFP), Upstream Facing Port (UFP), Accessory Modes, Alternate Interfaces
- ✓ Dual-Role functionality
- ✓ CC detection and control logic
- ✓ Active cable detection and power support
- ✓ Thin USB PD interface for adaptive charging and vendor defined messages (w/ dedicated processor)
- ✓ Audio and Debug Accessory Detection
- ✓ 9-ball WLCSP (1.215 x 1.215mm)

### Target Applications:

Anywhere a USB cable is deployed today.



## ADDITIONS TO REGISTER-ABLE PRODUCTS LIST

### Industrial & Motor Control Modules

**FSB43004A** is a 40 V, 3 phase, Motion SPM® 45 Series inverter module including Control IC for Gate Drive and Protection.

Fairchild's low loss Power Trench MosFets offer  $R_{ds(ON)}=3.0$  mΩ(max) making this an excellent integrated solution for motor drive solutions in small battery powered applications.

[Order Samples](#)      [Download Data Sheet](#)

#### Key Features Include:

- ✓  $V_{ds} = 40V$
- ✓ Low  $R_{ds(on)}$  (2.1mΩ Typical)
- ✓  $I_d = 180A$  pk 47A at  $T_c = 100C$
- ✓  $R_{th(j-c)} = 3.92^{\circ}C/W$
- ✓ Under-Voltage Protection.
- ✓ Fault signaling
- ✓ Active-HIGH interface
- ✓ works with 3.3 / 5 V Logic, Schmitt-trigger inputs
- ✓ 3 separate open emitter pins for Current Sensing.

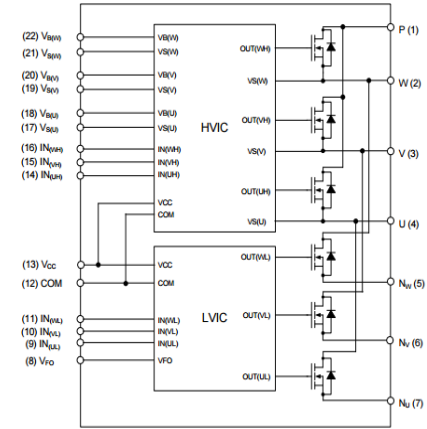


Figure 3. Internal Block Diagram

[Visit Motor Control Page](#)

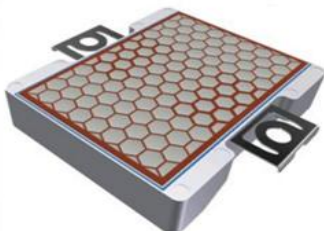
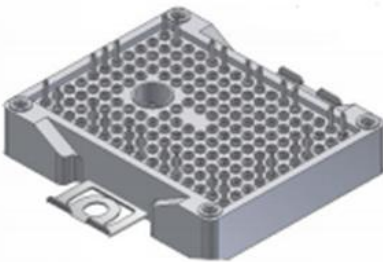
**FPF2G120BF07AS** is a 600v, 50A 3ch boost converter optimized for multi-string solar applications.

Fairchild's integrated module includes high speed field stop IGBTs, SiC Boost Diodes and an NTC in the F2 Solderless Press Fit Module. This solution offers designers lower conduction and switching losses in a solderless press fit package.

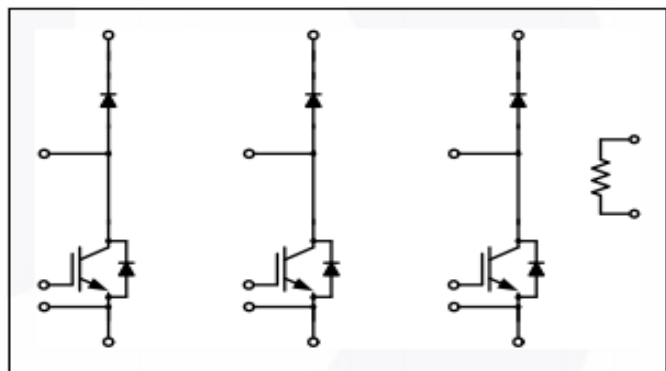
[Order Samples](#)      [Download Data Sheet](#)

#### Key Features: High Efficiency

- ✓ Low Conduction and Switching Losses
- ✓ High Speed Field Stop IGBT
- ✓ SiC SBD for Boost Diode
- ✓ Built-in NTC for Temperature Monitoring
- ✓ Al<sub>2</sub>O<sub>3</sub> Substrate with Low Thermal Resistance



**FPF2G120BF07ASP** version has the Phase Change Material Pre-Applied



Internal Circuit Diagram



## ADDITIONS TO REGISTER-ABLE PRODUCTS LIST

### PSR (Primary Side Regulation Controllers for LED Lighting Applications.

**Application Diagram**

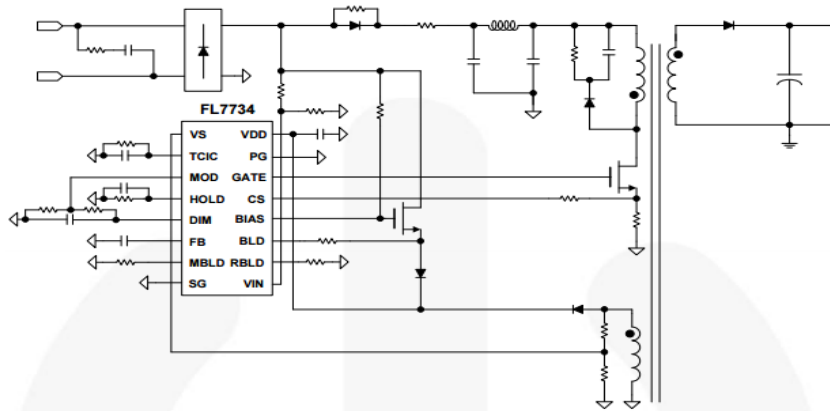
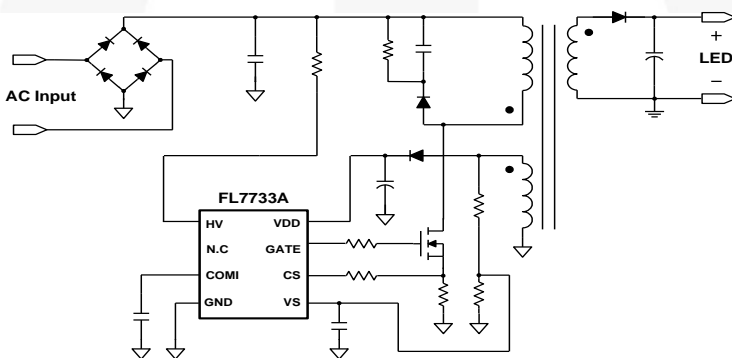


Figure 1. Typical Application

#### Lighting Application:

*Non Dimming Applications up to 60 W*

- ✓ A19, PAR30/38 Bulb
- ✓ Down Lighting Driver
- ✓ Flat Lighting Driver
- Indoor / Outdoor Lighting Driver



#### Phase-Cut Dimmable Lighting Solutions

- ✓ A19, PAR30/38 Bulbs, Down Lights

[Visit Lighting Home Page](#)

Part, Number	Description	Package	Isolation Capable	Active PFC	Dimming	Soft Start	Protection
<a href="#">FL663</a>	Primary-Side-Regulation <b>PWM Controller for LED Illumination</b>	SO 8L NB	Yes	No	No	Yes	OCP, OTP, OVP, UVLO
<a href="#">FL6632</a>	Primary-Side-Regulated <b>LED Driver with Power Factor Correction</b>	SO 8L NB	Yes	Yes	No	Yes	OCP, OTP, OVP, Open LED, Short LED
<a href="#">FL6630</a>	Single-Stage Primary-Side-Regulation <b>PWM Controller for PFC and LED Dimmable Driving</b>	SO 8L NB	Yes	Yes	Yes	Yes	OCP, OTP, OVP, Open LED, Short LED
<a href="#">FL7734</a>	Single-Stage Primary-Side-Regulation <b>PWM Controller for PFC and Phase Cut Dimmable LED Driving</b>	SO 16L NB	Yes	Yes	Yes	Yes	OTP, Open LED, Rcs open/Short, Short LED
<a href="#">FL7733A</a>	Primary-Side-Regulated <b>LED Driver with Power Factor Correction</b>	SO 8L NB	Yes	Yes	No	Yes	OTP, OVP, Open LED, Rcs open/Short, SLP, Short LED