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## FLS2100XS for 400W- Half-Bridge LLC Resonant Control IC for Lighting

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### General Description

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The FLS-XS series of general lighting power controllers includes highly integrated power switches for medium - to high-power lumens applications. Offering everything necessary to build a reliable and robust half -bridge resonant converter, the FLS-XS series simplifies designs and improves productivity, while improving performance. The FLS-XS series combines power MOSFETs with fastrecovery type body diodes, a high-side gate -drive circuit, an accurate current controlled oscillator, frequency limit circuit, soft-start, and built-in protection functions. The high-side gate -drive circuit has common -mode noise cancellation capability, which guarantees stable operation with excellent noise immunity. The fastrecovery body diode of the MOSFETs improves reliability against abnormal operation conditions, while minimizing the effect of reverse recovery. Using zero voltage switching (ZVS) dramatically reduces the switching losses and significantly improves efficiency. ZVS also reduces switching noise noticeably, which allows a small-sized Electromagnetic Interference (EMI) filter.

The FLS-XS series can be applied to resonant converter topologies such as series resonant, parallel resonant, and LLC resonant converters.

### Product Status/Pricing/Packaging

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- ? Fairchild 1,000 piece Budgetary Pricing. \*
- ? If there is no sample button displayed at the top of the page, please contact one of the [Fairchild distributors](#) or your [local sales office](#) to obtain samples.
- ? [Top mark packaging information for product FLS2100XS](#) is available. \*\*

Product	Product Status	Eco Status	*Pricing	Package Type	Leads	Packing Method	Package Drawing	**Package Marking Convention	RoHS IPC1752	RoHS/REACH/JIG Certificate of Compliance
FLS2100XS	Full Production	<a href="#">Green by design</a>	\$2.67	<a href="#">SIP</a>	9	RAIL		Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &E&3 (3-Digit Date Code) &K Line 2: FLS2100XS		

### Support

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- ? [Knowledgebase - \(online Q&A\)](#)
- ? [Find a local sales office](#)
- ? [Product change notices \(PCN\)](#)
- ? [How to Buy Products or Order Samples](#)




### Features

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- ? Variable Frequency Control with 50% Duty Cycle for Half-Bridge Resonant Converter Topology
- ? High Efficiency through Zero Voltage Switching (ZVS)
- ? Internal UniFET™ with Fast -Recovery Body Diode
- ? Fixed Dead Time (350ns) Optimized for MOSFETs
- ? Up to 300kHz Operating Frequency
- ? Auto-Restart Operation for All Protections with External LV<sub>CC</sub>
- ? Protection Functions: Over-Voltage Protection (OVP), Over-Current Protection (OCP), Abnormal Over-Current Protection (AOCP), Internal Thermal Shutdown (TSD)

### Engineering Connections

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### Applications/Block Diagram(s)

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- ? General LED Lighting
- ? Industrial, Commercial, and Residential LED Lighting Fixtures
- ? Outdoor Lighting: Street, Roadway, Parking, Construction and Ornamental LED Lighting Fixtures

### Qualification Support

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- ? Customer qualification data for the [FLS2100XS](#)

### Application Notes

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- ? [AN-9729: LED Application Design Guide Using Half -Bridge LLC Resonant Converter for 100W Street Lighting](#) (814 K) Oct 14, 2011
- ? [AN-9730: LED Application Design Guide Using Half -Bridge LLC Resonant Converter for 160W Street Lighting](#) (820 K) Oct 14, 2011

[Browse All Application Notes](#)