The IRS254(01/11) series is comprised of high-voltage, high-frequency buck regulator control ICs for AC-DC offline, non-isolated applications requiring multiple light emitting diode (LED) circuits or requiring DC-DC color-mixing capabilities. Applications include indoor and outdoor signage as well as architectural, entertainment, design and decorative lighting. Rated at 200V or 600V, the IRS254(01/11) series incorporates a continuous mode, time-delayed hysteretic buck regulator to control the average load current within a tolerance of five percent, using an accurate on-chip band gap voltage reference. An external high-side bootstrap circuit drives the buck switching element at high frequencies up to 500kHz. A low-side driver is also provided for synchronous rectifier designs.
### High-Voltage Buck Control ICs for Constant LED Current Regulation

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| IRS25401PbF   | DIP8          | • 200V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
| IRS25401SPbF  | SO-8 Narrow   | • 600V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
| IRS25401STRPbF| SO-8 Narrow (Tape and Reel) | • 200V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
| IRS25411PbF   | DIP8          | • 600V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
| IRS25411SPbF  | SO-8 Narrow   | • 600V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
| IRS25411STRPbF| SO-8 Narrow (Tape and Reel) | • 600V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |

Note: The IRS254(01/11) are pin compatible drop in replacements for the IRS254(0/1)

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**Part Number** Package Specifications

| IRS25401PbF | DIP8 | • 200V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
|------------|------|-------------------------------------------------------------------|
| IRS25401SPbF | SO-8 Narrow | • 600V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
• 140ns deadtime  
• 15.6V Zener clamp on VCC  
• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |
| IRS25401STRPbF | SO-8 Narrow (Tape and Reel) | • 200V half-bridge driver IC  
• Micropower startup (<500µA)  
• ±2% voltage reference  
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• 140ns deadtime  
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• Frequency up to 500 kHz  
• Auto restart, non-latched shutdown  
• PWM dimmable |

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