

## USB Power Switch Single 7.5V 4A 8-Pin SOIC N Tube



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Microchip Technology, Inc](#)

**Package/Case:** SOP-8

**Product Type:** Switches

**Lifecycle:** Obsolete

### General Description

The MIC2505, MIC2505-1, MIC2505-2, and MIC2506 are single and dual integrated high-side power switches that consist of TTL compatible control/enable inputs, a charge pump, and protected N-channel MOSFETs. The MIC2505/6 family can be used instead of separate high-side drivers and MOSFETs in many low-voltage applications. The MIC2505/6 family controls voltages ranging from 2.7V to 7.5V. The MIC2505-series can deliver at least 2A continuous current while the MIC2506 can deliver at least 1A continuous current from each output. A slow turn-on feature prevents high inrush current when switching capacitive loads. The internal control circuitry is powered from the same 2.7V to 7.5V. Within the device's input range, outputs can be forced higher than the input voltage when disabled. Multipurpose open-drain fault flag outputs indicate overcurrent limiting, open-load detection (except MIC2505-1 and -2 versions), thermal shutdown, or undervoltage lockout for each channel. Overcurrent limiting is internally fixed and requires no external components. Open-load detection is active when the switch is off. When off, a normal load pulls the output pin low. If the load is open, an optional, external, high-value resistor pulls the output pin high, triggering the fault flag. MIC2505-1 and -2 versions are tailored to Universal Serial Bus (USB) applications and do not include open-load detection. Thermal shutdown turns off the output if the die temperature exceeds approximately 135°C. If enabled, the switch automatically restarts when the temperature falls 10°C. Undervoltage lockout (UVLO) shuts off the output if the supply drops below 2.3V typical and reenables the output when the supply exceeds 2.5V typical.

## Key Features

Low MOSFET on resistance to 2.7V

2.7V to 7.5V input

110 $\mu$ A typical on-state supply current

1 $\mu$ A typical off-state supply current

Output can be forced higher than input (off-state)

Thermal shutdown

2.5V undervoltage lockout (UVLO)

Open-load detection (MIC2505BN/M and MIC2506BN/M only)

Open-drain fault flag

5ms (slow) turn-on and fast turnoff

Logic-level control/enable input

## Recommended For You

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### MIC4451YN

Microchip Technology, Inc

DIP8

### MIC4427YN

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DIP8

### MIC4427YM

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### MIC2954-02WS

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SOT223

### MIC2951-02YM

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### MIC4452ZT

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TO-220-5

### MIC5013YN

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PDIP-8

### MIC2582-MYM

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### MIC4224YM

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### MIC4123YME

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### MIC2951-02YM-TR

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SOIC-8

### MIC4422ZM

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### MIC49150WR

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SPAK-5

### MIC2506YM

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### MIC49300WR

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S-PAK-5