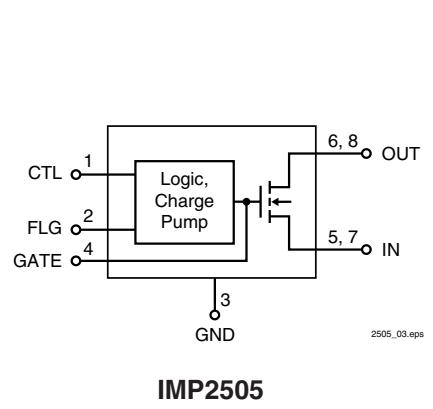


# USB High-Side Power Switch Selection Guide

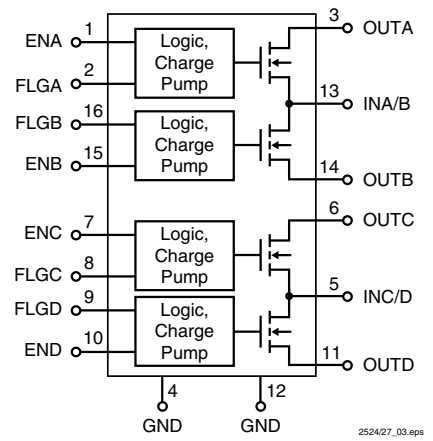
Part Number	Single	Dual	Quad	Maximum ON Resistance	Minimum Load Current
IMP2505	●			0.05Ω	2A
IMP2524			●	0.14Ω	500mA
IMP2525	●			0.14Ω	500mA
IMP2525A	●			0.07Ω	500mA
IMP2526		●		0.14Ω	500mA
IMP2527			●	0.3Ω	500mA

USB SelGd 101.eps

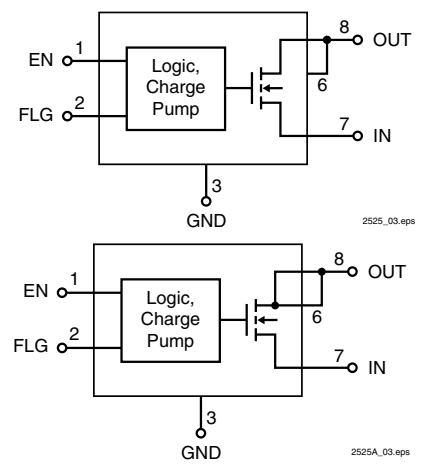
## Pin Configuration Schematic



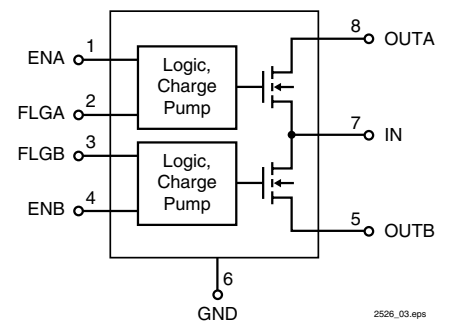
IMP2505



IMP2524/IMP2527



IMP2525/IMP2525A



IMP2526

IMP, Inc. Power Management

# Sales and Distribution Offices



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 Internet: www.impweb.com

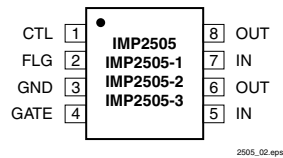
## Asia Pacific Area Sales Office

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 E-mail: info@jacoelectronics.com  
 Internet: www.jacoelectronics.com

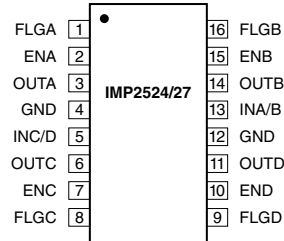
### IMP2505



2505\_02.eps

- ◆ Intelligent Current Limiting
  - 12ms current limit fault flag filter
  - Masked current limit fault for capacitive load charging
- ◆ Low Resistance Power Switch
  - 30mΩ typical at 5V
  - 35mΩ typical at 3.3V
- ◆ Wide Input Voltage: 2.7V to 7.5V
- ◆ Low ON-state Supply Current: 110μA typical
- ◆ Low Power Off-state Supply Current
  - 0.75μA typical
- ◆ On-chip Protection
  - Current limiting
  - Thermal shutdown
  - Undervoltage lockout (UVLO)
- ◆ Open Drain Fault Flag
- ◆ Logic Level Control/Enable Input
- ◆ Optimum Slow 5ms Turn-on and Fast Turn-off
- ◆ Two Package Options: 8-pin SO and 8-pin DIP
- ◆ Extended Operating Temperature Range:
  - 40°C to 85°C

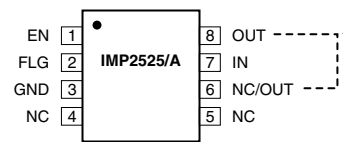
### IMP2524/27



2524/27\_02.eps

- ◆ USB Rev. 1.1 Compliant
- ◆ Four independent switches
- ◆ 2.7V to 5.5V input operation
- ◆ Low MOSFET ON resistance
  - IMP2524: 0.1Ω, 0.14Ω maximum
  - IMP2527: 0.2Ω, 0.3Ω maximum
- ◆ 500mA continuous load current per switch
- ◆ Low supply current
  - 110μA ON-state current, 0.75μA OFF-state current
- ◆ 1.25A maximum current limit, 750mA typical
- ◆ Thermal shutdown 2.4V undervoltage lockout (UVLO)
- ◆ Open-drain flag output
  - Undervoltage
  - Current limit
  - Thermal shutdown
- ◆ Output can be force higher than input
- ◆ Active HIGH(-1) and active LOW(-2) enable
- ◆ 16-pin SO and DIP packages, Die available
- ◆ Pin compatible with the Micrel MIC2524 and MIC2527

### IMP2525/A

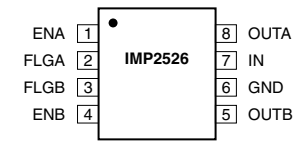


\*Connect pins 6 and 8 for MIC2525 compatibility

2525/A\_02.eps

- ◆ Meets or exceeds USB Rev. 1.1 specification
- ◆ Low MOSFET  $R_{ON}$  (0.14Ω at 3V)
- ◆ 2.7V to 5.5V input operation
- ◆ Current limiting
- ◆ Soft-start turn-on (1ms) prevents turn-on glitches
- ◆ 500mA continuous load current
- ◆ MOSFET short-circuit current limit (1.25A max)
- ◆ Low supply current
  - 110μA ON state current, 1μA OFF state current
- ◆ Active-LOW or Active-HIGH Enable input
- ◆ 3.3V or 5V logic compatibility
- ◆ Fault Flag indicates three fault conditions:
  - Undervoltage
  - Current limit
  - Thermal shutdown
- ◆ Open-drain Fault Flag output
- ◆ 2.4V Undervoltage Lockout (UVLO)
- ◆ Pin compatible with the Micrel MIC2525
- ◆ IMP2525A
  - ◆ Low MOSFET  $R_{ON}$  (0.07Ω at 3V)
  - ◆ Pin compatible with the Micrel MIC2525
    - 50% lower than MIC2525

### IMP2526



2526\_02.eps

- ◆ USB Rev. 1.1 compliant
- ◆ 2.7V to 5.5V input operation
- ◆ Low MOSFET ON resistance (0.1Ω at 5V)
- ◆ Low supply current
  - 110μA ON state current, 1μA OFF state current
- ◆ 500mA continuous load current per switch
- ◆ 1.25A maximum current limit, 750mA typical
- ◆ Thermal shutdown 2.4V undervoltage lockout (UVLO)
- ◆ Open-drain flag output
  - Undervoltage
  - Current limit
  - Thermal shutdown
- ◆ Active HIGH(-1) and active LOW(-2) enable
- ◆ Pin compatible with the Micrel MIC2526