# Plug-In Power Product Selector Guide



3Q 2008

## Non-isolated point-of-load modules - horizontal (SMD and through hole)



| V <sub>IN</sub> | Description        | 2-3 A      | 6 A           | 10 A          | 12-16 A       | 18-22 A     | 26-30 A     | 40-60 A    |
|-----------------|--------------------|------------|---------------|---------------|---------------|-------------|-------------|------------|
| +3.3 V          | PTH                |            | PTH03000W     | PTH03060W/Y   | PTH03010W/Y   | PTH03020W   | PTH03030W   |            |
|                 |                    |            | PTH03050W/Y   |               |               |             |             |            |
| +3.3 V/+5 V     | T2 2nd generation  | PTH04T260W | PTH04T230W    | PTH04T240W/F  | PTH04T220W    |             |             |            |
|                 | PTH                | PTH04000W  |               |               |               |             |             |            |
|                 |                    | PTH04070W  |               |               |               |             |             | PTH04040W  |
|                 | PTH                |            | PTH05000W     | PTH05060W/Y   | PTH05010W/Y   | PTH05020W   | PTH05030W   |            |
| +5 V            |                    |            | PTH05050W/Y   |               |               |             |             |            |
|                 | T2 2nd generation  |            |               |               |               |             | PTH05T210W  |            |
| +5 V/+12 V      | PTH                | PTH08080W  |               |               |               |             |             |            |
|                 |                    | PTH08000W  |               |               |               |             |             |            |
| +5 V/+12 V      | T2 2nd generation  | PTH08T260W | PTH08T230W    | PTH08T240W/F  | PTH08T220W    |             |             | PTH08T250W |
|                 | Digital PowerTrain |            |               | PTD08A010W    |               | PTD08A020W  |             |            |
| +12 V           | PTH                |            | PTH12000L/W   | PTH12060L/W/Y | PTH12010L/W/Y | PTH12020L/W | PTH12030W/L | PTH12040W  |
|                 |                    |            | PTH12050L/W/Y |               |               |             |             |            |
|                 | T2 2nd generation  |            |               |               |               |             | PTH08T210W  | PTH08T255W |

POLA products are listed in bold red.

## Non-isolated point-of-load modules - vertical SIPs (through hole)

| V <sub>IN</sub> | Description       | 6-8 A       | 10 A      | 16-18 A     | 50 A       |
|-----------------|-------------------|-------------|-----------|-------------|------------|
| +3.3 V          | PTV               | PTV03010W   |           | PTV03020W   |            |
| +5 V            | PTV               | PTV05010W   |           | PTV05020W   |            |
| +5 V/+12 V      | PTR               | PTR08060W   | PTR08100W |             |            |
| +12 V           | PTV               | PTV12010W/L |           | PTV12020W/L | PTV08040W  |
|                 | T2 2nd generation |             |           |             | PTV08T250W |

POLA products are listed in bold red.

## Non-isolated wide-input modules

| V <sub>IN</sub>          | Module                 | I <sub>OUT</sub> | <b>V</b> <sub>OUT</sub>      |  |  |  |
|--------------------------|------------------------|------------------|------------------------------|--|--|--|
| Single positive output   |                        |                  |                              |  |  |  |
| 7 V to 36 V              | PTN78000W/H            | 1.5 A            | 2.5 V to 12.6 V/12 V to 22 V |  |  |  |
| 7 V to 36 V              | PTN78060W/H            | 3 A              | 2.5 V to 12.6 V/12 V to 22 V |  |  |  |
| 7 V to 36 V              | PTN78020W/H            | 6 A              | 2.5 V to 12.6 V/12 V to 22 V |  |  |  |
| Single boost output      |                        |                  |                              |  |  |  |
| 2.9 V to 5.5 V PTN04050C |                        | 1 A (12 W)       | 5 V to 15 V                  |  |  |  |
| Single negative output   |                        |                  |                              |  |  |  |
| +2.9 V to 7 V            | PTN04050A              | 1 A (6 W)        | −3.3 V to −15 V              |  |  |  |
| +7 V to 29 V PTN78000A   |                        | 1.5 A (9 W)      | −3.3 V to −15 V              |  |  |  |
| +9 V to 29 V             | -9 V to 29 V PTN78060A |                  | −3.3 V to −15 V              |  |  |  |
| +9 V to 29 V PTN78020A   |                        | 4 A (25 W)       | −3.3 V to −15 V              |  |  |  |

#### Non-Isolated

#### Model Number Description:

PTH = Horizontal Mount

PTN = Wide Input Horizontal Mount

PTV = Vertical Single-In-Line (SIP)

PTR = Vertical Single-In-Line (SIP)

### Model Number Suffix:

A = Positive Input, Negative Output

H = High Output Voltage Model

L = Low Output Voltage Model

W = Wide Input Voltage Range

Y = DDR/QDR Memory Termination

## **More Information:**

power.ti.com

## Isolated miniature DC/DC modules

|                 |                  |         | V <sub>OUT</sub> Single | V <sub>OUT</sub> Dual   | Regulated |
|-----------------|------------------|---------|-------------------------|---|-----------|
| V <sub>IN</sub> | 1 W              | 2 W     | (V)                     | (V)   | (V)       |
|                 | DCP0105, DCV0105 |         | 5, 12, 15               | ±5 V(10 V1), ±7 (14 V1), ±12 V (24 V1), ±15 V (30 V1)   |           |
| 5 V             | DCH0105          |         | 5, 12, 15               | $\pm 5 \text{ V}(10 \text{ V}^1), \ \pm 12 \text{ V} \ (24 \text{ V}^1), \ \pm 15 \text{ V} \ (30 \text{ V}^1)$ |           |
| 3 <b>v</b>      |                  | DCP0205 | 3.3, 5, 7, 9, 12, 15    | ±15 V (30 V¹)   |           |
|                 | DCR0105          |         | 3.3, 5                  | _   | <b>✓</b>  |
|                 |                  | DCP0212 | 5, 12                   | ±15 V (30 V1), ±12 V (24 V1)  |           |
| 12 V            | DCR0112          |         | 3.3, 5                  | _   | <b>✓</b>  |
|                 |                  | DCR0212 | 5                       | _   | <b>✓</b>  |
| 15 V            | DCP0115, DCV0115 |         |                         | ±12 V (24 V¹), ±15 V (30 V¹)  |           |
| 10 0            |                  | DCP0215 | 5, 15                   | _   |           |
|                 | DCP0124, DCV0124 |         | 5                       | ±15 V (30 V¹)   |           |
| 24 V            |                  | DCP0224 | 5                       | $\pm 5~V~(10~V^1),~\pm 12~V~(24~V^1),~\pm 15~V~(30~V^1),~\pm 18~V~(36~V^1)$                                     |           |
|                 | DCR0124          |         | 3.3, 5                  | _   | <b>✓</b>  |
|                 |                  | DCR0224 | 5                       | _   | <b>✓</b>  |

(¹Voltage when dual module is used as a single output module per datasheet.)

## Isolated DC/DC modules

|                 | J/DC Illoudles |                     |                                       |                                       |                             |
|-----------------|----------------|---------------------|---------------------------------------|---------------------------------------|-----------------------------|
| Output Power    | Model          | V <sub>IN</sub> (V) | V <sub>OUT</sub>                      | (V)                                   | I <sub>OUT</sub> (A)        |
| Single Output   |                |                     |                                       |                                       |                             |
| 7 W             | PT4210         | 36 to 75            | 3.3, 5, 12                            |                                       | 0.6 to 1.5                  |
| 10 W            | PT4220         | 36 to 75            | 1.8, 3.3, 5, 12                       | , 2.5, 1.5, 1.3                       | 1.3 to 3                    |
|                 | PTMA401120     | 36 to 75            | 12                                    | 2                                     | 1                           |
|                 | PTMA402050     | 36 to 75            | 5                                     |                                       | 2                           |
|                 | PTMA403033     | 36 to 75            | 3.                                    | 3                                     | 3                           |
| 10 W (PoE)      | PTB48540A      | 36 to 75            | 5                                     |                                       | 2                           |
|                 | PTB48540B      | 36 to 75            | 3.3                                   |                                       | 3                           |
|                 | PTB48540C      | 36 to 75            | 12                                    | 2                                     | 0.85                        |
| 12 W            | PTMA401120     | 36 to 75            | 12                                    | 2                                     | 1                           |
| 20 W            | PT4120         | 36 to 75            | 3.3, 5, 12, 15,                       | 5.2, 1.5, 2.5                         | 1.3 to 5                    |
| 30 W            | PTB78560A      | 18 to 60            | 3.6 to 5.5                            |                                       | 6                           |
|                 | PTB78560B      | 18 to 60            | 1.8 to 3.6                            |                                       | 8                           |
|                 | PTB78560C      | 18 to 60            | 9 to 13.2                             |                                       | 2.5                         |
|                 | PTB48560A      | 36 to 75            | 3.6 to 5.5                            |                                       | 6                           |
|                 | PTB48560B      | 36 to 75            | 1.8 to 3.6                            |                                       | 8                           |
|                 | PTB48560C      | 36 to 75            | 9 to 13.2                             |                                       | 2.5                         |
| 50 W            | PTEA404120     | 36 to 75            | 12                                    |                                       | 4                           |
|                 | PTEA420025     | 36 to 75            | 2.5                                   |                                       | 20                          |
| 66 W            | PTEA420033     | 36 to 75            | 3.                                    | 3                                     | 20                          |
| 72 W            | PTB78520W      | 18 to 60            | 1.8 to 3.6                            |                                       | 20                          |
| 75 W            | PTQA430025     | 36 to75             | 2.5                                   |                                       | 30                          |
| 85 W            | PTB48520W      | 36 to 75            | 1.8 to 3.6                            |                                       | 25                          |
| 100 W           | PTQA430033     | 36 to 75            | 3.3                                   |                                       | 30                          |
|                 | PTQA420050     | 36 to 75            | 5                                     |                                       | 20                          |
| 200 W           | PTQB425080     | 36 to 75            | 8                                     |                                       | 25                          |
|                 |                |                     | V <sub>OI</sub>                       | IJΤ                                   | Total I <sub>OUT</sub>      |
| Output Power    | Model          | V <sub>IN</sub> (V) | V <sub>OUT</sub> 1/I <sub>OUT</sub> 1 | V <sub>0UT</sub> 2/I <sub>0UT</sub> 2 | $(I_{OUT}1 + I_{OUT}2)$ (A) |
| Multiple Output |                |                     |                                       |                                       |                             |
| 42 W            | PTB48502A      | 36 to 75            | 3.3 V/10 A                            | 1.2 V/13 A                            | 21                          |
| 65 W            | PTB48510A      | 36 to 75            | +5 V/6.5 A                            | -5 V/6.5 A                            | 13                          |
|                 | PTB48510C      | 36 to 75            | +15 V/2.15 A                          | -15 V/2.15 A                          | 4.30                        |
| 72 W            | PTB48510B      | 36 to 75            | +12 V/3 A                             | -12 V/3 A                             | 6                           |
| 85 W            | PTB48600A      | 36 to 75            | +5 V/8.5 A                            | −5 V/8.5 A                            | 17                          |
|                 |                |                     |                                       |                                       |                             |

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