

DC-DC Converter Short Form

MPD6S022S (Output Voltage Variable / 3A Output)

■ Features

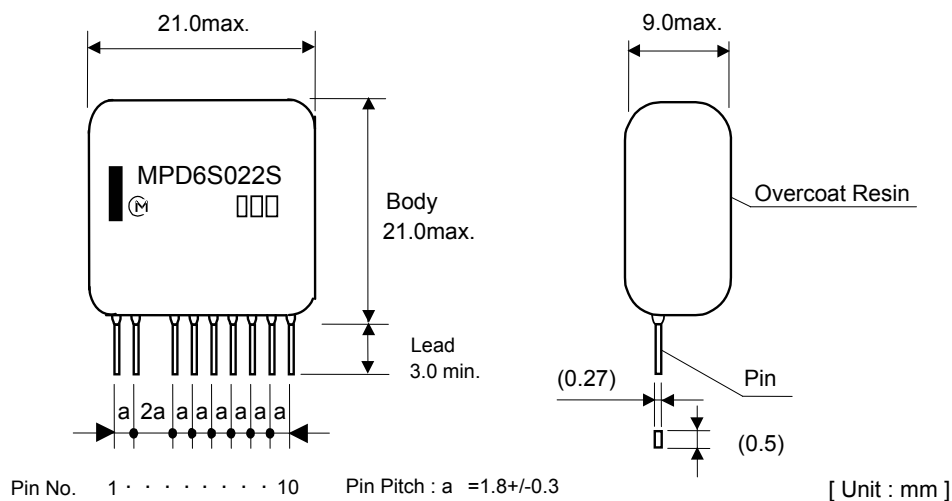
- High Efficiency (95%@3.3V/1A)
- Small Footprint SIP
- Wide Output Voltage (1.1-3.6V)
- Wide Input Voltage (3.0-5.5V)
- Short Circuit Protection
- No external caps required



■ General Specifications (Ta=25°C)

| Item | Symbol | Condition | MIN. | TYP. | MAX. | UNIT |
|----------------|--------|-----------------------|------|------|------|------|
| Input Voltage | Vin | | 3.0 | 5.0 | 5.5 | V |
| Output Voltage | Vout | Vin-Vout>1V | 1.1 | - | 3.6 | V |
| Output Current | Iout | | 0 | - | 3 | A |
| Ripple Voltage | Vrip | Vin=5V,Vo=3.3V,Io=3A. | - | - | 100 | mVpp |
| Efficiency | EFF | Vin=5V,Vo=3.3V,Io=1A. | - | 95 | - | % |

■ Dimensions and Pin Assign



| Pin No. | Signal |
|---------|----------------------|
| 1. | Vin |
| 2. | ON/OFF |
| 3. | no pin |
| 4,5. | N.C(internally used) |
| 6,7. | GND |
| 8. | Adjust |
| 9,10. | Vout |

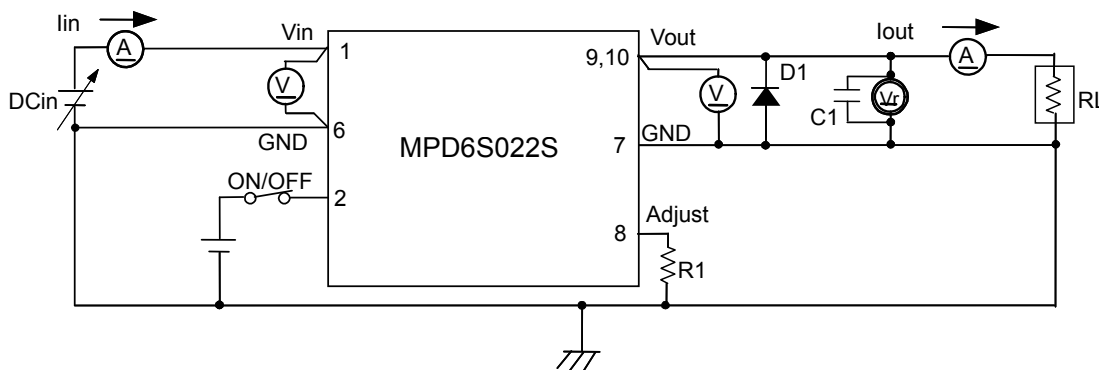
△ Note:

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2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

■ Rating

- Input Voltage : 3.0 to 5.5V
- ON/OFF Voltage : 0 to V_{in}
- Operating Ambient Temperature : 0 to +70 °C
- Storage Ambient Temperature : -40 to +85 °C

■ Test Circuit

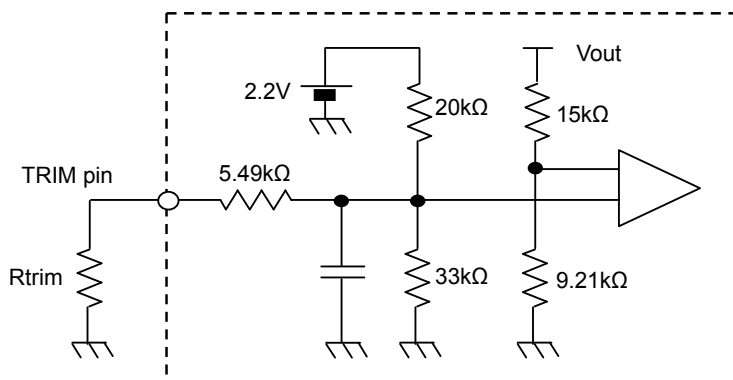


■ Output Voltage Adjustment

$$R1 = \frac{20}{\frac{5.782}{V_{out}[V]} - 1.606} - 5.479[\text{k}\Omega]$$

<RTRIM(R1) CALCULATION EXAMPLE>

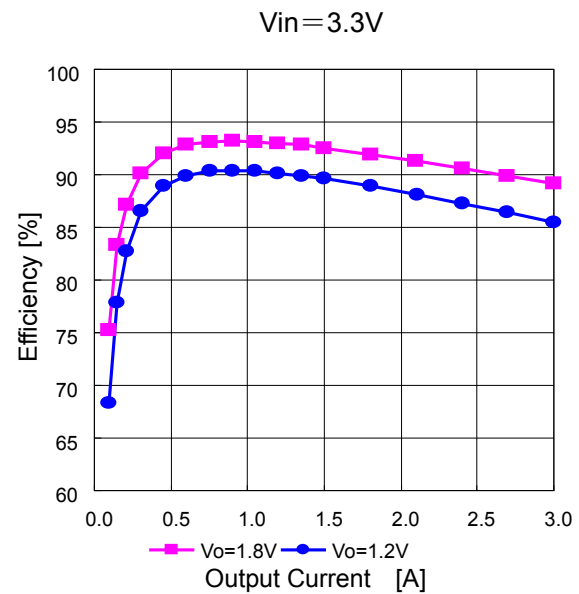
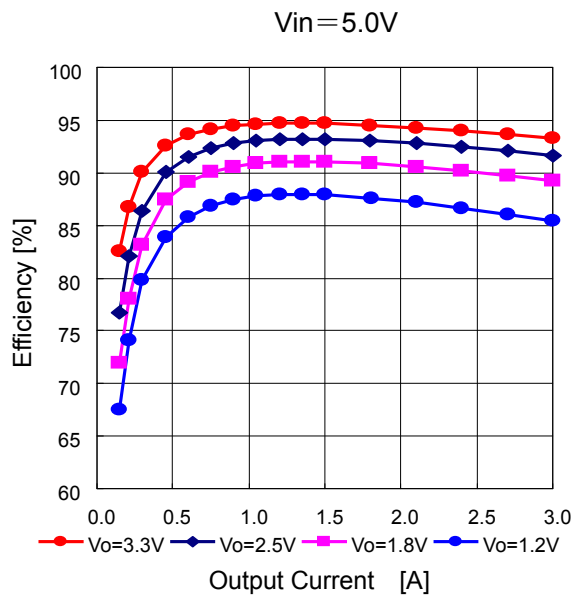
| Vout(V) | Calculated R1 (Ω) | R1 example (Ω) |
|---------|-------------------|----------------|
| 3.6 | ∞ | Open |
| 3.3 | 131.4k | 130k+1.5k |
| 2.5 | 22.82k | 22k+820 |
| 1.8 | 6973 | 6.8k+180 |
| 1.5 | 3415 | 3.3k+120 |
| 1.2 | 747 | 680+68 |
| 1.1 | 0 | Short |



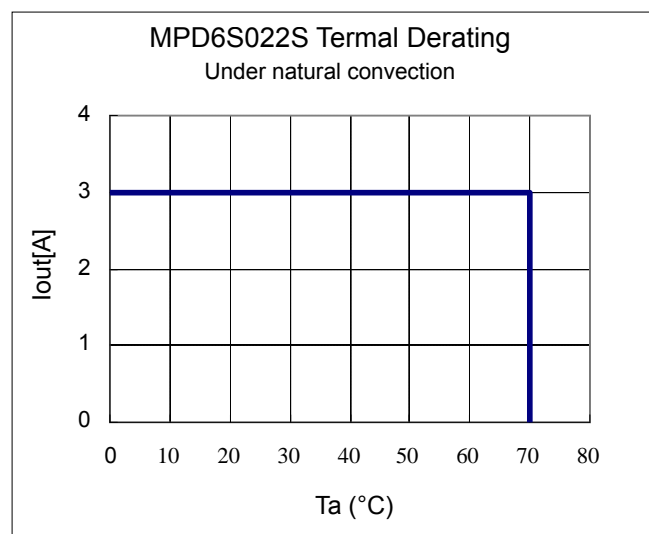
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■ Efficiency Characteristics



■ Thermal Derating



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