

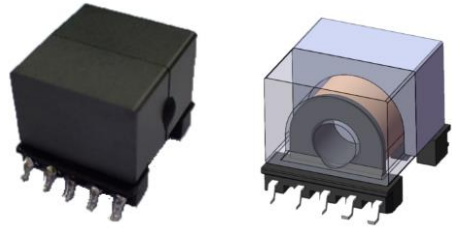
DC / DC converter transformer for Automotive

VEP1313A/B

New Products

RoHS

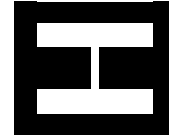
AEC-Q200



■ Features

- Small, for various power supplies
- Optimal transformer design according to required specifications is possible
- Compatible with multiple outputs
- □□□□A : Heat resistance ~+150°C Withstand voltage ~AC 1500Vrms
- □□□□B : Heat resistance ~+150°C Withstand voltage ~AC 2500Vrms

■ Magnetic structure



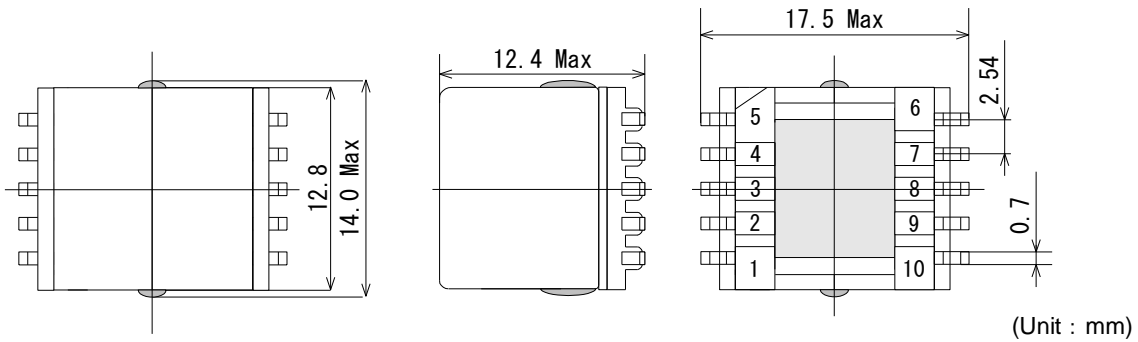
Operating Temperature Range : -40 °C~ +150 °C(include self-heating)

Weight : 5.8 g

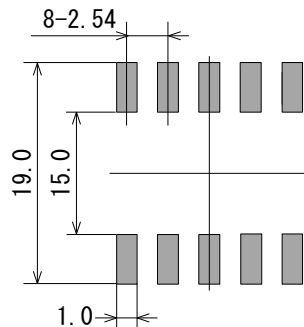
■ Application

- In-vehicle
Power supply for Power Control Unit for HEV / EV
Isolated Power supply for Automotive, etc

■ Dimensions



■ Recommended Land Pattern



SAGAMI ELEC CO., LTD.
<https://www.sagami-elec.co.jp>

10-30, Ichibashimo-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0024, Japan
 Over Seas Sales Dept. TEL : +81 45 511 3141, E-mail : ossg@sagami-elec.co.jp
 Engineering Dept. TEL : +81 45 521 4543

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■ Selection Guide

| Type | Appearance | | Maxim output power(reference) (W) | | | Withstand voltage (Primary -Secondary) (Vrms/1min) |
|----------|------------|-----|--------------------------------------|-----|-----|---|
| | | | Conditions | | | |
| | | | (A) | (B) | (C) | |
| VEP1313A | EP13 | SMD | 7.0 | 3.5 | 6.7 | 1500 |
| VEP1313B | EP13 | SMD | 7.0 | 3.5 | 6.7 | 2500 |

| Type | Input voltage range (V) | Output voltage range (V) | Operating frequency (kHz) | Number of outputs (reference) |
|----------|-------------------------------|--------------------------------|---------------------------------|-------------------------------------|
| VEP1313A | 0.7~40 | 140 max. | 500 max. | 2 |
| VEP1313B | 0.7~40 | 140 max. | 500 max. | 2 |

The above mentioned maximum out

As for the core material, the upper limit is 500kHz for ordinary low loss materials.

Operation at 300kHz or higher is handled by changing the material.

| Item | Conditions | | |
|------------------|------------|----------|----------------|
| | (A) | (B) | (C) |
| Core materials | Low loss | Low loss | High-frequency |
| Circuits | Fly-back | Fly-back | Fly-back |
| Frequency | 100kHz | 100kHz | 500kHz |
| Temperature rise | 40°C | 20°C | 20°C |



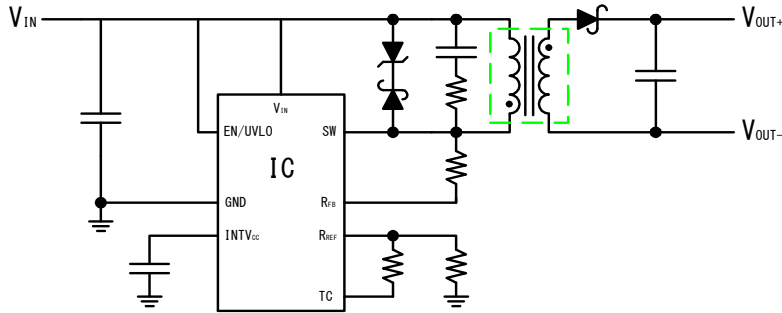
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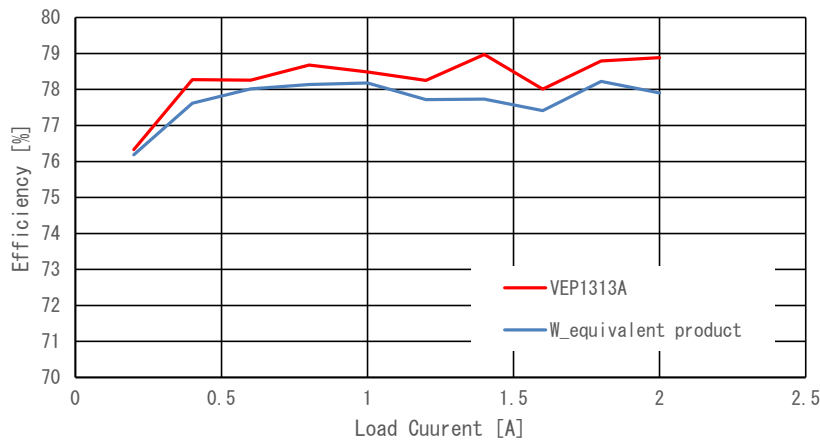
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■ Recommended Reference circuit

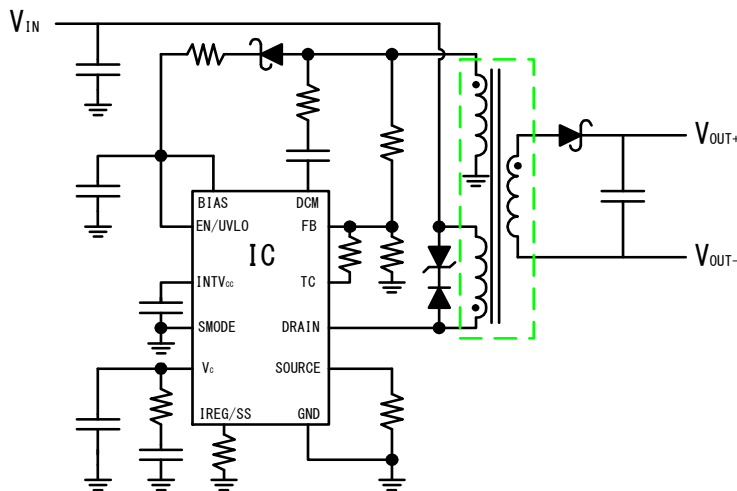
(1) 3V to 32Vin/5Vout Isolated Flyback Converter



• Efficiency comparison(24Vin/5Vout)



(2) 20V to 450Vin/12Vout Isolated Supply



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