シャーシ制御

電気式パワーステアリング
(BLDC モータードライブ)

トランスミッションECU、
ダブルクラッチBLDC

THE VISHAY ADVANTAGE

AEC準拠
高電力密度
高パルス電流耐性
薄型
長寿命
小型

電気式パワーステアリング (BLDC モータードライブ)

www.vishay.com

ALUMINUM CAPACITORS

SMD Aluminum Capacitors, High Temperature Up to 150 °C, Low ESR

260 CLA-V

- High ripple current up to 1400 mA at 150 °C, capacitance up to 3300 µF
- Useful life up to 2000 h at 150 °C, high vibration capability

RESISTORS

Thin Film Resistors, 4.7 Ω to 3.01 MΩ, 0402 to 1210 Case Sizes, 50 V to 200 V

TNPW e3

- Excellent stability |ΔR/R| ≤ 0.05 % after 1000 h at 70 °C, 0402 to 1210 case sizes

MOSFETs

N-Channel MOSFETs in 8 mm x 8 mm PowerPAK®, 40 V, 160 A, 1.2 mΩ

SQJQ100EL

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Ultra-low $R_{DS(on)}$, thermally enhanced PowerPAK® 8x8L replaces D^2PAK in less than half of the area

MOSFETs

N-Channel MOSFETs as Known Good Die (KGD) Rated at 40 V, 0.72 mΩ

SQC200N04-0m72KGD

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Efficient KGD packaging allows high power density and reduced parasitics

RESISTORS

Precision Thin Film Chip Resistor Arrays, Superior Moisture Resistivity

ACAS0612 AT Precision

- Resistance ratio up to 1:20, superior tracking stability over lifetime
- Relative TCR to ± 5 ppm/K (tracking), AEC-Q200 qualified, sulfur-resistant

RESISTORS

Power Metal Strip® SMD Resistors, 4-Terminal, Low Value (Down to 0.0001 Ω)

WSK1216

- High power rating of 3 W to 5 W with TCR = 20 ppm/K
- Very low resistance values, 0.0001 Ω to 0.004 Ω, with tolerance of 1%

OPTOELECTRONICS

3-Channel SMD Transmissive Sensors for "Turn and Push" Optical Encoding

TCUT1630X01

- Wide operating temperature range of -40 °C to +110 °C, 3 output channels
- Sensing of motion, speed, and direction; third channel for trigger signal

NON-LINEAR RESISTORS

SMD Glass-Protected NTC Thermistors

NTCS...e3

- Standard series, AEC-Q200 compliant
- Glass-protected with soft terminations

INDUCTORS

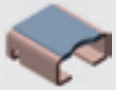
Shielded SMD Low-Profile, High-Current IHLP® Inductors, EMI Filters, 155 °C, Low DCR

IHLP-6767GZ-5A

- Very high-current and high-temperature operation for filters

RESISTORS

Power Metal Strip® SMD Resistors



WSLP2726

- Very high power (7 W)
- Resistance = 0.3 mΩ to 4 mΩ

INDUCTORS

Shielded EMI Filters Up to 190 A I_{DCR} , 2.2 µH, Ultra-Low DCR (0.22 mΩ)

IHXL-2000VZ-5A

- Very high-current and high-temperature operation for filters and energy storage

CERAMIC CAPACITORS

AEC-Q200 Qualified, Broad Range of Sizes and Working Voltages, C0G (NPO), X7R, and X8R

VJ...31X RoHS Automotive MLCCs

- RoHS and Green compliant parts available
- AgPd termination available for epoxy bonding

トランスミッションECU、ダブルクラッチBLDC

www.vishay.com

MOSFETs

N-Channel MOSFETs as Known Good Die (KGD) Rated at 40 V, 0.72 mΩ

SQC200N04-0m72KGD

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Efficient KGD packaging allows high power density and reduced parasitics

MOSFETs

N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 40 V, 3.0 mΩ

SQJA46EP

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Thermally enhanced PowerPAK® SO-8L replaces DPAK in less than half of the area

MOSFETs

Dual N-Channel MOSFETs in 8 mm x 8 mm PowerPAK®, 40 V, 100 A, 3.4 mΩ

SQJQ904E

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- High power density dual PowerPAK® 8x8L offers significant reduction in PCB area

CERAMIC CAPACITORS

AEC-Q200 Qualified, Broad Range of Sizes and Working Voltages, C0G (NPO), X7R, and X8R

VJ…31X RoHS Automotive MLCCs

- RoHS and Green compliant parts available
- AgPd termination available for epoxy bonding

RECTIFIERS

High Current Density Surface-Mount Schottky Barrier Rectifiers

SS3P4L

- AEC-Q101 qualified
- Very low profile - typical height of 1.0 mm

INDUCTORS

Coupled Inductors for SEPIC Converter

IHCL-3232DZ-5A

- High-temperature operation up to 155 °C
- Frequency range up to 5.0 MHz

DIODES

600 W, 6.8 V to 51 V SMD PAR® TVS Diodes

TA6Fxx

- T_j = 185 °C
- Very low profile - typical height of 0.95 mm

RESISTORS

Power Metal Strip® SMD Resistors, Wide Terminal, 1 mΩ to 30 mΩ, 2 W

WSLP2010

- Very high power to footprint size ratio (2 W in 2010)
- Construction is impervious to high-sulfur environments

RESISTORS

SMD Thick Film Resistors, High Stability

RCA0603

- TCR = 50 to 200 ppm/K
- Sulfur-resistant

NON-LINEAR RESISTORS

SMD Glass-Protected NTC Thermistors

NTCS...e3

- Standard series, AEC-Q200 compliant
- Glass-protected with soft terminations

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

IHLP-2525CZ-5A

- Excellent high-temperature performance for DC/DC converter input and output filters

RESISTORS

Precision Gold Terminated Thin Film Chip Resistor Arrays for Conductive Gluing

ACAS 0606 ATAU Precision

- Glueable gold terminations, resistance ratio up to 1:20, tolerance ± 0.05 %
- AEC-Q200 qualified, extreme sulfur resistance, superior tracking stability

Power Metal Strip® 抵抗器の特長

30 ppm/°C以下の低TCR、0.2 mΩまでの低いΩ値、厳しい許容差、高温性能

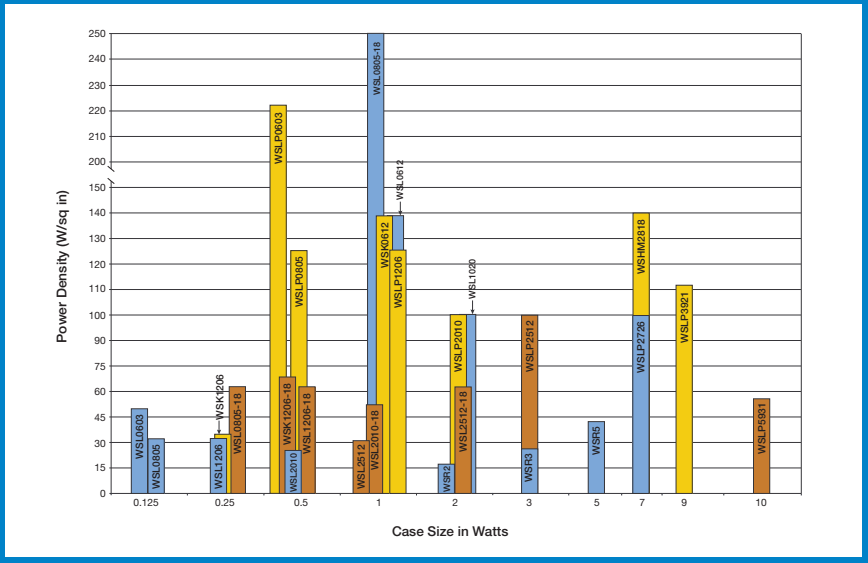
ビシェイ社のPower Metal Strip® 電流検出抵抗器は、高温用途での優れた性能、幅広いパッケージサイズ、0.0002 Ω ～ 1 Ωの抵抗値を兼ね備えます。特許取得済みの最先端デバイスは、巻線デバイスと同等の過負荷性能と30 ppm/°Cまでの低い抵抗温度係数を提供します。

電流検出Power Metal Strip抵抗器は、モニタリングが容易な電圧を電流に変換することで制御回路による回路の電流レベル監視を実現します。
回路の電流フローに抵抗し、その測定値から制御回路が電圧降下を検出し、監視を可能にします。Power Metal Strip抵抗器の低い抵抗値がこの機能を高い効率で実現させます。

高電力密度（最大222 W/in², 34.4 W/cm²）

ビシェイ社のPower Metal Strip抵抗器は、WSL‥‥-18、WSLP、WSR3、WSR5、WSHM2818タイプの"高電力"抵抗器に進化し、目的に応じた材料やプロセスにより10 Wまでの高定格電力を実現します。

WSL‥‥-18、WSLP、WSR3、WSR5、WSHM2818タイプの抵抗器は、優れた電気的特性を維持しながら、高い電力／パッケージサイズ比を提供します。高定格電力により設計者は、製品を小さいボードで実現可能で、生産時間の短縮と原材料コストの削減に貢献します。



超高電力、表面実装Power Metal Strip 電流検出抵抗器

FEATURES
- 小型ケースサイズで高電力を提供：最大10 W
- 極めて低い抵抗値：0.0002 Ω ～ 1.0 Ω
- 厳しい抵抗許容差：± 0.1 %まで

低い抵抗温度係数（TCR）（30 ppm/°Cまで）

Power Metal Strip抵抗器の低TCRは、自己発熱や、高温環境による抵抗値変化を最小限に抑えます。

下記の表は、標準100 ppm/°C metal strip、700 ppm/°C厚膜チップ抵抗器と比較した30 ppm/°C Power Metal Strip抵抗器の電圧を表しています。