

## 主要元件

# 动力总成系统 – 喷油控制和油泵



燃油直喷



压电喷射控制



油泵控制  
(无刷直流)




### VISHAY 优势

- 通过 AEC 认证
- 耐高温
- 高可靠性
- 小尺寸
- 长寿命
- 高压 SMD 元件

# 燃油直喷



<p>ALUMINUM CAPACITORS</p> <p><b>SMD Aluminum Capacitors, High Temperature Up to 150 °C, Low ESR</b></p>  <p><a href="#">260 CLA-V</a></p> <ul style="list-style-type: none"> <li>• High ripple current up to 1400 mA at 150 °C, capacitance up to 3300 µF</li> <li>• Useful life up to 2000 h at 150 °C, high vibration capability</li> </ul>	<p>RESISTORS</p> <p><b>Precision Thin Film Chip Resistor Arrays, Superior Moisture Resistivity</b></p>  <p><a href="#">ACAS0612 AT Precision</a></p> <ul style="list-style-type: none"> <li>• Resistance ratio up to 1:20, superior tracking stability over lifetime</li> <li>• Relative TCR to ± 5 ppm/K (tracking), AEC-Q200 qualified, sulfur-resistant</li> </ul>	<p>MOSFETS</p> <p><b>Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 60 V, 12 mΩ</b></p>  <p><a href="#">SQJB60EP</a></p> <ul style="list-style-type: none"> <li>• AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation</li> <li>• Dual configuration in thermally enhanced PowerPAK® SO-8L saves board space</li> </ul>
<p>RECTIFIERS</p> <p><b>200 V, 2 x 3 A Fred Pt® Hyperfast Rectifiers</b></p>  <p><a href="#">VS-6CSH02HM3</a></p> <ul style="list-style-type: none"> <li>• Hyperfast recovery time, <math>t_{rr} = 27</math> ns, reduced <math>Q_{rr}</math>, and soft recovery</li> <li>• Low forward voltage drop and low leakage current</li> </ul>	<p>RECTIFIERS</p> <p><b>200 V, 2 x 3 A Fred Pt® Hyperfast Rectifiers</b></p>  <p><a href="#">VS-8DKH02</a></p> <ul style="list-style-type: none"> <li>• Dual 5x6 (FlatPAK™) package</li> <li>• <math>T_j = 175</math> °C</li> </ul>	<p>DIODES</p> <p><b>Surface-Mount PAR® TVS, 600 W, 6.8 V to 51 V</b></p>  <p><a href="#">TA6Fxx</a></p> <ul style="list-style-type: none"> <li>• Very low-profile DO-221AC (SlimSMA™) package - typical height of 0.95 mm</li> <li>• <math>T_j = 185</math> °C</li> </ul>
<p>RESISTORS</p> <p><b>Power Metal Strip® SMD Resistors, Wide Terminal, 1 mΩ to 3 mΩ, 1 W</b></p>  <p><a href="#">WSL0612</a></p> <ul style="list-style-type: none"> <li>• Low EMF, high temperature up to 170 °C</li> </ul>	<p>INDUCTORS</p> <p><b>Low-Profile, High-Current IHLP® Inductors</b></p>  <p><a href="#">IHLP-5050FD-5A</a></p> <ul style="list-style-type: none"> <li>• Excellent high-temperature performance and noise filtering</li> </ul>	<p>CERAMIC CAPACITORS</p> <p><b>AEC-Q200 Qualified, Broad Range of Sizes and Working Voltages, C0G (NPO), X7R, and X8R</b></p>  <p><a href="#">VJ...31X RoHS Automotive MLCCs</a></p> <ul style="list-style-type: none"> <li>• RoHS and Green compliant parts available</li> <li>• AgPd termination available for epoxy bonding</li> </ul>
<p>MOSFETS</p> <p><b>N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 80 V, 7 mΩ</b></p>  <p><a href="#">SQJA80EP</a></p> <ul style="list-style-type: none"> <li>• AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation</li> <li>• Ultra-low <math>R_{DS(on)}</math>, thermally enhanced PowerPAK® 8x8L replaces D<sup>2</sup>PAK in less than half of the area</li> </ul>	<p>NON-LINEAR RESISTORS</p> <p><b>SMD Glass-Protected NTC Thermistors</b></p>  <p><a href="#">NTCS...e3</a></p> <ul style="list-style-type: none"> <li>• Standard series, AEC-Q200 compliant</li> <li>• Glass-protected with soft terminations</li> </ul>	<p>MOSFETS</p> <p><b>Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 40 V, 9.66 mΩ</b></p>  <p><a href="#">SQJB42EP</a></p> <ul style="list-style-type: none"> <li>• AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation</li> <li>• Dual configuration in thermally enhanced PowerPAK® SO-8L saves board space</li> </ul>

## 压电喷射控制




<p>RESISTORS</p> <p><b>Professional High-Temperature Mini-MELF Resistors</b></p>  <p><a href="#">MMA 0204 HT</a></p> <ul style="list-style-type: none"> <li>Operating temperature up to 175°C, power handling of 500 mW</li> <li>AEC-Q200 qualified, high overall stability <math> \Delta R/R  \leq 0.1\%</math>, intrinsically sulfur-resistant</li> </ul>	<p>MOSFETs</p> <p><b>N-Channel MOSFETs in DPAK Package Rated at 300 V, 10 A, 330 mΩ</b></p>  <p><a href="#">SQD10N30-330H</a></p> <ul style="list-style-type: none"> <li>AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation</li> <li>Up to 300 V operation in DPAK package</li> </ul>	<p>RECTIFIERS</p> <p><b>600 V, 2 A FRED Pt® Ultrafast Rectifiers</b></p>  <p><a href="#">VS-2EFU06HM3</a></p> <ul style="list-style-type: none"> <li>SMF (DO-219AB) package, operating temperature up to 175 °C</li> <li>Pulse current up to 30 A (6 ms)</li> </ul>
<p>RESISTORS</p> <p><b>Power Metal Strip® SMD Resistors, 0.5 mΩ to 500 mΩ, 1 W</b></p>  <p><a href="#">WSL2512</a></p> <ul style="list-style-type: none"> <li>2512 package size, also available in 2816 with 2 W</li> </ul>	<p>INDUCTORS</p> <p><b>High-Isolation Flyback Transformers in Press-Fit and SMD Versions</b></p>  <p><a href="#">Customized Transformers</a></p> <ul style="list-style-type: none"> <li>Customized solutions up to kW ranges</li> </ul>	<p>INDUCTORS</p> <p><b>Low-Profile, High-Current IHLP® Inductors</b></p>  <p><a href="#">IHLP-5050FD-5A</a></p> <ul style="list-style-type: none"> <li>Excellent high-temperature performance and noise filtering</li> </ul>
<p>NON-LINEAR RESISTORS</p> <p><b>SMD Glass-Protected NTC Thermistors</b></p>  <p><a href="#">NTCS...e3</a></p> <ul style="list-style-type: none"> <li>Standard series, AEC-Q200 compliant</li> <li>Glass-protected with soft terminations</li> </ul>	<p>INDUCTORS</p> <p><b>Low-Profile, High-Current IHLP® Inductors</b></p>  <p><a href="#">IHLP-2525CZ-5A</a></p> <ul style="list-style-type: none"> <li>Excellent high-temperature performance for DC/DC converter input and output filters</li> </ul>	<p>CERAMIC CAPACITORS</p> <p><b>AEC-Q200 Qualified, Broad Range of Sizes and Working Voltages, C0G (NPO), X7R, and X8R</b></p>  <p><a href="#">VJ...31X RoHS Automotive MLCCs</a></p> <ul style="list-style-type: none"> <li>RoHS and Green compliant parts available</li> <li>AgPd termination available for epoxy bonding</li> </ul>
<p>DIODES</p> <p><b>Unidirectional and Bidirectional Power SMD TVS Diodes, SMA Package, Up to 400 W</b></p>  <p><a href="#">SMAJxx</a></p> <ul style="list-style-type: none"> <li>DO-214AC (SMA) package, high-voltage clamping</li> <li>6.4 V to 231 V</li> </ul>	<p>ALUMINUM CAPACITORS</p> <p><b>Radial Miniature, High-Voltage, Up to 450 V with CR Up to 220 μF</b></p>  <p><a href="#">152RMH</a></p> <ul style="list-style-type: none"> <li>High voltage applications, 105 °C long life</li> <li>Miniaturized, ultra-high CV product per unit volume</li> </ul>	<p>MOSFETs</p> <p><b>N-Channel MOSFETs in 5 mm x 6 mm PowerPAK®, 100 V, 32 A, 11 mΩ</b></p>  <p><a href="#">SQJ402EP</a></p> <ul style="list-style-type: none"> <li>AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation</li> <li>100 V MOSFETs for use in low-side flyback converters</li> </ul>

## 油泵控制 (无刷直流)



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  $\mu$ F
- Useful life up to 2000 h at 150 °C, high vibration capability

RESISTORS

**Power Metal Strip® SMD Resistors, Very High Power (3 W), Low Value (to 0.0005  $\Omega$ )**




[WSLP2512](#)

- Very high power rating of 3 W in 2512 package
- Extremely low resistance values from 0.0005  $\Omega$  to 0.01  $\Omega$  and tolerance of 1 %

MOSFETs

**Dual N-Channel MOSFETs in 8 mm x 8 mm PowerPAK®, 40 V, 100 A, 3.4 m $\Omega$**




[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

MOSFETs

**N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 40 V, 3.2 m $\Omega$**



[SQJ444EP](#)

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Logic level  $V_{th}$ , low  $R_{DS(on)}$ , thermally enhanced PowerPAK® SO-8L replaces DPAK in less than half of the area

RECTIFIERS

**1 A, 200 V FRED Pt® Hyperfast Rectifiers**




[VS-1EFH02HM3](#)

- Hyperfast recovery time,  $t_{rr} = 25$  ns, reduced  $Q_{rr}$ , and soft recovery
- DO-219AB (SMF) package, high  $T_j$  of 175 °C

NON-LINEAR RESISTORS

**SMD Glass-Protected NTC Thermistors**




[NTCS...e3](#)

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

CERAMIC CAPACITORS

**High Operating Temperature, Automotive Grade Leaded MLCC Capacitors**




[HOTcap® K...H, A...R, K...R](#)

- High-reliability MLCC insert with wet build process
- High operating temperature (up to 175 °C for K...H and up to 160 °C for A...R and K...R), rated voltages: 50 V, 100 V, 200 V

MOSFETs

**N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L Rated at 40 V, 3.0 m $\Omega$**




[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

RESISTORS

**Power Metal Strip® SMD Resistors, Wide Terminal, 1 m $\Omega$  to 6 m $\Omega$ , 6 W**



[WSL1020](#)

- TCR < 20 ppm/K, high-temperature performance up to 170 °C

INDUCTORS

**Power SMD IHLP® Storage Inductors, E-Field Shielded, Inductance of 0.22  $\mu$ H to 22  $\mu$ H**



[IHLE-4040DD-5A](#)

- Shielded housing provides excellent protection against EMI (B and E fields)
- Optimized for high frequency