主要元件

车外照明

VISHAY 优势

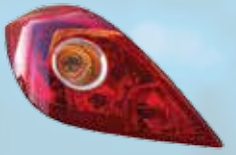
达到车规要求
高 SFR 元件
改进的 EMI 元件
通过认证的耐高温被动元件 (≥ 155 °C)

LED 前大灯单元

日间行车灯

LED 雾灯

LED 尾灯及信号灯



LED 前大灯单元

MOSFETs

Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK® SO-8L, 60 V, 12 mΩ

SQJB60EP

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Dual configuration in thermally enhanced PowerPAK® SO-8L saves board space

INDUCTORS

Low Profile, High Current Inductors with E-Field Shield

IHLE-3232DD-5A

- High temperature operation up to 155 °C
- Integrated e-field shield eliminates need for separate shielding

DIODES

Surface-Mount TRANSZORB® TVS

P6SMB36CA

- AEC-Q101 qualified
- 600 W peak pulse power capability with 10/1000 µs waveform

RESISTORS

Professional Thin Film MELF Resistors

MMB 0207

- Unrivaled surge handling capability, ultimate stability over lifetime
- AEC-Q200 qualified, approved according to EN 140401-803, intrinsically sulfur-resistant, Green product

RESISTORS

Power Metal Strip® SMD Resistors, Very High Power (to 3 W), Extremely Low Resistance (to 0.0005 Ω)

WSLP

- Very high power rating, to 3 W
- Extremely low resistance values from 0.0005 Ω to 0.1 Ω and tolerance of 1 %

NON-LINEAR RESISTORS

SMD Glass-Protected NTC Thermistors

NTCS...e3

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

RECTIFIERS

High Current Density, Surface-Mount Trench MOS Barrier Schottky Rectifiers

V8P10HM3

- Ultra-low V_F = 0.466 V at I_F = 4 A
- Very low profile - typical height of 1.1 mm

INDUCTORS

Low-Profile, High-Current Coupled Inductor

IHCL-4040DZ-5A

- High-temperature operation up to 155 °C
- Shielded construction

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

IHLP-5050EZ-5A

- High saturation current
- High-temperature operation up to 155 °C

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

IHLP-4040DZ-5A

- Excellent high-current performance for noise filters
- High-temperature operation up to 155 °C

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

TANTALUM CAPACITORS

Solid Tantalum Surface-Mount Chip Capacitors, Tantamount® Molded Case, Automotive Grade

TH3

- High-temperature molded tantalum capacitors, HI-TMP®, up to 150 °C

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日间行车灯

www.vishay.com

RESISTORS

Pulse-Proof, High-Power Thick Film Chip Resistors

CRCW-HP e3

- Excellent pulse load capability
- Enhanced power rating

MOSFETs

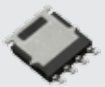
Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK SO-8L, 40 V, 33 mΩ

SQJ946EP

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Optimized for high-frequency DC/DC applications, lower switching losses

MOSFETs

N-Channel MOSFETs in 3 mm x 3 mm PowerPAK® 1212 with Wettable Flanks, 80 V, 25 mΩ



SQSA80ENW

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- For higher currents

MOSFETs

N-Channel MOSFETs in Small 3 mm x 3 mm SOT-23, 100 V, 1.6 A, 300 mΩ

SQ2398ES

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- 100 V MOSFETs for switching low currents in small packages

RECTIFIERS

High Current Density, Surface-Mount Trench MOS Barrier Schottky Rectifier

V8P10HM3

- Ultra-low V_F = 0.466 V at I_F = 4 A
- Very low profile - typical height of 1.1 mm

RECTIFIERS

High-Voltage Schottky Diode, 100 V, 2 A, T_j = 175 °C

SS2PH10

- Very low profile - typical height of 1.0 mm
- Low forward voltage drop, low power losses

DIODES

High Power Density Surface-Mount PAR® TVS

TPSMP

- AEC-Q101 qualified, T_j = 185 °C capability, suitable for automotive applications
- Very low profile - typical height of 1.0 mm

RESISTORS

Thick Film Surface-Mount Chip Resistors, Wraparound, Extremely Low Value

RCWE

- Low resistance values from 0.01 Ω to 0.976 Ω and tolerance of 1 %
- Thick film construction with 2x power capacity

RESISTORS

Professional Thin Film MELF Resistors

MMB 0207

- Unrivaled surge handling capability, ultimate stability over lifetime
- AEC-Q200 qualified, approved according to EN 140401-803, intrinsically sulfur-resistant, Green product

OPTOELECTRONICS

SMD PLCC-2 Plus 0.5 W White LEDs

VLMW51Q2R3

- Luminous intensity up to 51 lm in compact 3.5 x 3.5 x 1.2 mm surface-mount package
- White color coordinates of 0.33 (X) and 0.33 (Y) with 120° viewing angle

NON-LINEAR RESISTORS

SMD Glass-Protected NTC Thermistors

NTCS...e3

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

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

LED 雾灯

RESISTORS

Pulse-Proof, High-Power Thick Film Chip Resistors

CRCW-HP e3

- Excellent pulse load capability
- Enhanced power rating

MOSFETs

Dual N-Channel MOSFETs in 5 mm x 6 mm PowerPAK®, 40 V, 11 mΩ / 22 mΩ

SQJ942EP

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation
- Optimized for high-frequency DC/DC applications, lower switching losses

RECTIFIERS

2 A, 40 V Schottky Diodes

SS2P4

- Low-profile DO-220AA (SMP) package for low-voltage, high-frequency DC/DC converters; switching power supplies; freewheeling diodes; and polarity protection

RECTIFIERS

45 V, 3 A Trench Schottky Diodes, Ultra-Low V_F

V3PAL45

- Low-profile DO-221BC (SMPA) package for low-voltage, high-frequency DC/DC converters; switching power supplies; freewheeling diodes; and polarity protection

RESISTORS

Professional Thin Film MELF Resistors

MMB 0207

- Unrivaled surge handling capability, ultimate stability over lifetime
- AEC-Q200 qualified, approved according to EN 140401-803, intrinsically sulfur-resistant, Green product

RESISTORS

Thick Film Surface Mount Chip Resistors, Wraparound, Extremely Low Values

RCWE

- Low resistance values from 0.01 Ω to 0.976 Ω and tolerance of 1 %
- Thick film construction with 2x power capacity

DIODES

Surface-Mount PAR® TVS

TPSMA

- 400 W peak pulse power capability with a 10/1000 µs waveform

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

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

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

IHLP-2020CZ-5A

- Compact size and high current, low saturation for noise filtering
- Up to 155 °C continuous operation

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LED 尾灯及信号灯

RESISTORS

Pulse-Proof, High-Power Thick Film Chip Resistors

CRCW-HP e3

- Excellent pulse load capability
- Enhanced power rating

RESISTORS

Professional Thin Film MELF Resistors

MMB 0207

- Unrivaled surge handling capability, ultimate stability over lifetime
- AEC-Q200 qualified, approved according to EN 140401-803, intrinsically sulfur-resistant, Green product

MOSFETs

N-Channel MOSFETs in 3 mm x 3 mm PowerPAK® 1212 with Wettable Flanks Rated at 40 V, 9 mΩ

SQS484ENW

- AEC-Q101 qualified, 100 % UIS and RG tested with up to 175 °C operation

RECTIFIERS

Surface-Mount Schottky Barrier Rectifiers

MSS1P6HM3

- Low-profile MicroSMP package for low-voltage, high-frequency inverters; DC/DC converters; and polarity protection applications
- AEC-Q101 qualified

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

IHLP-1616BZ-A1

- Shielded construction, lowest DCR/μH in this package size
- Excellent DC/DC energy storage up to 5 MHz

RESISTORS

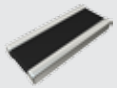
Thick Film Surface Mount Chip Resistors, Wraparound, Extremely Low Value

RCWE

- Low resistance values from 0.01 Ω to 0.976 Ω and tolerance of 1 %
- Thick film construction with 2x power capacity

RESISTORS

Power Metal Strip® SMD Resistors, Wide Terminal, 1 mΩ to 3 mΩ, 1 W



WSL0612

- Low EMF, high temperature up to 170 °C

OPTOELECTRONICS

SMD High-Power, 1 W Visible LEDs (Red, Amber, and Yellow)

VLMR71AAAC

- Compact, high-power SMD package: 6 x 6 x 1.5 mm
- Wide viewing angle of 120°

NON-LINEAR RESISTORS

SMD Glass-Protected NTC Thermistors

NTCS...e3

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

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

INDUCTORS

Low-Profile, High-Current IHLP® Inductors

IHLP-2020CZ-5A

- Compact size and high current, low saturation for noise filtering
- Up to 155 °C continuous operation

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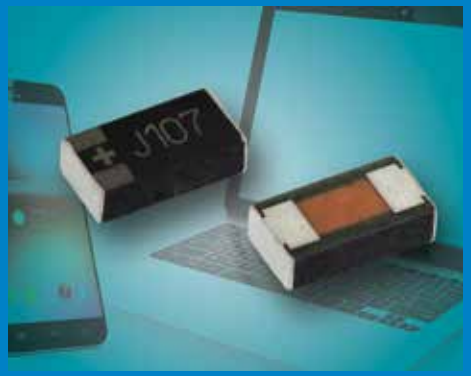
聚焦汽车级应用的钽电容器



TP8 MICROTAN® 小尺寸、高 CV 无引线框架电容器

TH4 耐高温模压片式电容器

对于空间紧张型应用，TP8 系列提供可达 100 µF 的容值和低至 0805 和 0603 的外壳尺寸。下表总结了 MICROTAN 系列相对于传统模压钽器件的优势。

TP8 下一代钽片式电容器

优势

业内最佳容积效率	→	更小尺寸、更高额定值
无引线框架	→	可靠性提升、ESR 下降、成本下降
L 形终端设计	→	优异的机械和电接触，焊点的肉眼检查
钽技术	→	与 MLCC 不同，无压电噪声
符合 RoHS 指令，无卤素	→	环保

为钽电容器选择应用范例

电源管理和转换

钽电容器产品提供广泛的可选外壳尺寸和符合汽车应用要求的耐高温额定值。它们可在开关模式电源中提供有效滤波，在高温 (引擎罩下) 环境中提供优异的长期稳定性和高容值性能。

能量储存

如今的汽车电路要求元件在各种负载和峰值功率下保证稳定的性能。Vishay 钽电容器为电源总线保持应用提供了低成本的能量储存解决方案。

耦合

汽车模拟电路 (包括音响、传感器和车载通讯系统应用) 需要耦合电容器来连接两个电路，使得仅有一个 AC 信号从第一个电路传到另一个电路。这里的电容器 (通常称为隔直流电容器) 可阻断直流信号，隔离两个耦合电路的直流偏压。Vishay 钽电容器可满足汽车模拟耦合应用对容值、DC 漏电流和稳定性 (相对于温度和时间变化) 的要求。

性能概述

系列	TP3	TP8	TH3	TH4
类型	低 ESR 模压 SMD	MICROTAN® 无引线框架 SMD	耐高温 (+150 °C) SMD	耐高温 (+175 °C) SMD
容值范围	0.1 µF 至 470 µF	1 µF 至 100 µF	0.33 µF 至 220 µF	10 µF 至 47 µF
电压范围	4 V 至 50 V	6.3 V 至 40 V	6.3 V 至 50 V	6.3 V 至 35 V
容值容差	± 10 %, ± 20 %	± 20 %, ± 10 %	± 10 %, ± 20 %	± 10 %, ± 20 %
外壳代码	A, B, C, D, E	M, W, R, P, A, N, T, B	A, B, C, D, E	B, C, D