KNSCHA

Empowering The World

广东科尼盛电子科技有限公司

KNSCHA ELECTRONICS CO.,LIMITED

IATF16949:2016 ISO9001:2015 ISO14001:2015

部品规格书

APPROVE SHEET

客 户 名 称 Customer Name	
产 品 名 称 Product Name	导电性聚合物混合铝电解电容器 Conductive Polymer Hybrid Aluminum Electrolytic Capacitors
客 户 料 号 Customer P/N	AEC-Q200固液混合铝电解电容器
科 尼 盛 料 号 KNSCHA P/N	118EC437
型 号 规 格 Product Type	35V/270μF 4000Hours@125℃ SMD,D10xL10.5mm HMR Series
日期 Date	2025年02月20日

制 造 Manufacture	
核 准 APPROVAL	制 作 PREPARED

客 户 承 认 栏 CUSTOMER APPROVED		
核 准 APPROVED	确 认 CHECKED	经 办 DESIGNED

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Aluminum Electrolytic Capacitors

- Source Manufacturer
- 25+ Years Experience
- 7X24 Hours Online Service

Film Capacitors

- Source Manufacturer
- 10+ Years Experience

cULus EAC VDE CQC KC TÜV

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KNSCHA ELECTRONICS CO.,LIMITED is a manufacturing high-tech enterprise founded in 1987 with aluminum electrolytic capacitors and film capacitors as its core for automotive, renewable energy, industrial and consumer electronics.We are working on developing aluminum electrolytic capacitors and plastic film capacitors having higher performance and higher reliability and its product chain extends to multiple categories such as electric double layer capacitors,ceramic capacitors and resistors under the trademark “KNSCHA”, quickly responding to customer needs.

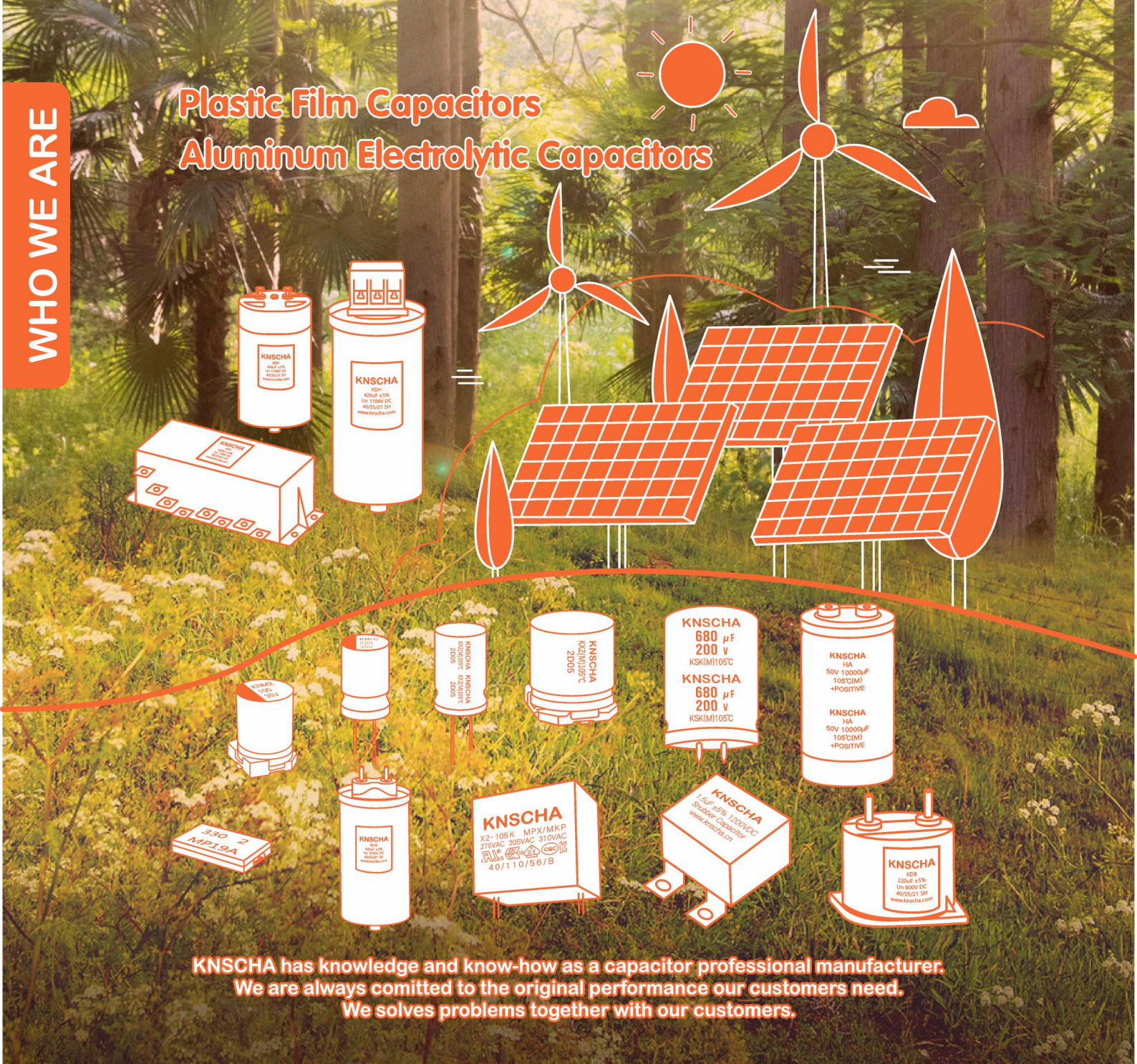
KNSCHA’s manufacturing facilities are located in Guangdong, Hunan and Jiangxi and employ over 380 peoples.Our state-of-art manufacturing facilities including R&D, testing labs, automated manufacturing, warehousing and customer service are operate with high quality standard, using Lean manufacturing processes with a comprehensive ISO 9001/14001 and IATF 16949 management systems.

Our products have obtained UL, VDE,TÜV, ENEC10, KTL, and CQC safety certification, and comply with SGS’s RoHS, Reach, AECQ-200 and National Grid Testing standards.

As a supporter of this advanced electronic industry, we are very pleased to have contributed to its development.

WHO WE ARE

Plastic Film Capacitors
Aluminum Electrolytic Capacitors



KNSCHA has knowledge and know-how as a capacitor professional manufacturer.
We are always comitted to the original performance our customers need.
We solves problems together with our customers.

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PRODUCT CHARACTERISTICS

型号 P/N	额定工作电压 Rated Voltage (V)	静电容量容值 Capacitance (±20 %) (μF)	使用温度范围 Category temp. range (℃)	规格尺寸 Case size (mm)	等效串联电阻 ESR(100kHz/+20℃) (mΩ)	允许最大纹波电流 Ripple current (100kHz/+125℃) (mA/rms)	损耗角的正切 (120Hz/+20℃) (tanδ)	漏电流 L C (μA)	耐久性 Endurance (Hours)
118EC437	35	270	-55~+125	D10xL10.5mm	20	2000	0.12	94.5	4000

HMR Series

导电高分子混合型铝电解电容器
Conductive Polymer Hybrid Capacitors

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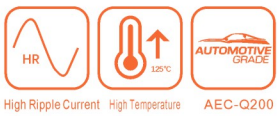
贴片型SMD

特征/FEATURES

- Operating with wide temperature range -55~+125°C
- High reliability & high voltage are realized by hybrid electrolyte
- Endurance 4000 hours
- RoHS & REACH compliant, Halogen-free
- AEC-Q200 compliant

- 适用于 -55~+125℃ 的宽温范围
- 通过混合型电解质，提升高可靠性和高电压化
- 耐久性4000 小时
- 符合RoHS 与REACH，无卤
- 符合AEC-Q200



High Ripple Current　High Temperature　AEC-Q200

规格表/SPECIFICATIONS

项目 Items	Characteristics 主要特性
Operation Temperature Range 使用温度范围	-55 ~ +125℃
Voltage Range 额定工作电压范围	16 ~ 100V
Capacitance Range 静电容量范围	22 ~ 1800μF
Capacitance Tolerance 静电容量允许偏差	±20% at 120Hz, 20℃
Leakage Current 漏电流	Leakage current ≤0.01CV (after 2 minutes application of rated voltage at 20℃) 漏电流≤0.01CV（在20℃ 环境中施加额定工作电压2 分钟后） C: Nominal capacitance (mF) 标称静电容量, V: Rated voltage (V) 额定电压
Dissipation Factor (tanδ) 损耗角正切	≤Specified value at 120Hz, 20℃. ≤规范值（在20℃ 120Hz 环境下）。
ESR 等效串联电阻	≤Specified value at 100KHz, 20℃. ≤规范值（在20℃ 100KHz 环境下）。
Stability at Low Temperature 低温特性	Measurement frequency 测试频率: 100KHz Impedance Ratio 阻抗比 ZT/Z20 (max.): Z(-25℃)/Z(20℃) ≤2.0; Z(-55℃)/Z(20℃) ≤2.5
Bias Humidity Test 耐湿负荷特性	When the capacitors are restored to 20℃ after the rated voltage is applied for 2000 hours at 85℃, 85% RH, they meet the characteristics listed below. 在85℃ 和相对湿度85%环境下施加额定工作电压2000 小时并冷却至20℃ 后，电容器的特性符合下表的要求。 Capacitance Change 静电容量变化率: Within ±30% of initial value 为初始值的±30%以内 Dissipation Factor 损耗角正切: 200% or less of initial specified value 不大于规范值的200% ESR 等效串联电阻: 200% or less of initial specified value 不大于规范值的200% Leakage Current 漏电流: Initial specified value or less 不大于规范值 Appearance 外观: No significant damage 无明显异常
Endurance 耐久性	When the capacitors are restored to 20°C after 2000 hours application of the rated voltage at 125°C, they meet the characteristics listed below. 在125°C 环境中施加额定工作电压4000 小时后，待电容器恢复至20°C 时进行测量，电容器的特性符合下表要求。 Capacitance Change 静电容量变化率: Within ±30% of initial value 为初始值的±30%以内 Dissipation Factor 损耗角正切: 200% or less of initial specified value 不大于规范值的200% ESR 等效串联电阻: 200% or less of initial specified value 不大于规范值的200% Leakage Current 漏电流: Initial specified value or less 不大于规范值
Shelf Life 高温贮存特性	When the capacitors are restored to 20°C after leaving under no load at 125°C for 1000 hours, they meet the specified value for endurance characteristics listed above. 在125°C 环境中无负荷放置1000 小时后，待电容器恢复至20°C 时进行测量，电容器的特性符合耐久性特性中所列的规定值。
Resistance to Soldering Heat 耐焊接热特性	After reflow soldering and restored at room temperature, they meet the characteristics listed below. 经过回流焊并冷却至室温后，电容器的特性符合下表的要求。 Capacitance Change 静电容量变化率: Within ±10% of initial value 初始值的±10%以内 Dissipation Factor 损耗角正切: Initial specified value or less 不大于规范值 Leakage Current 漏电流: Initial specified value or less 不大于规范值
Marking 标识	Black print on the case top. 铝壳顶部黑色字体印刷。

HMR Series

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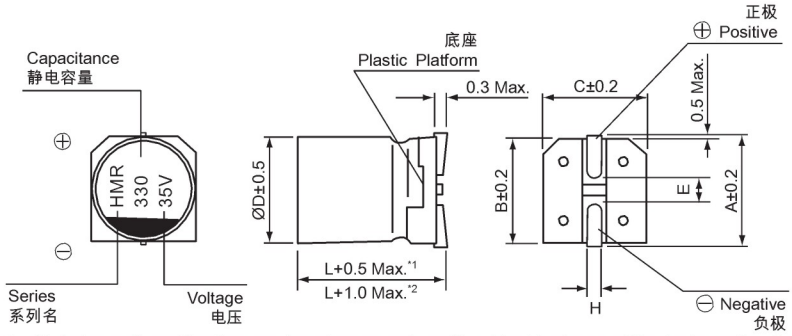
DRAWING 外形图 (Unit: mm)



*1. Applicable to Ø6.3 and Ø8
*2. Applicable to Ø10 and above
适用于Ø6.3 和Ø8
适用于Ø10 和Ø10 以上

Note: All design and specifications are for reference only and is subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.
注: 以上所提供的设计及特性参数仅供参考，任何修改不作预先通知。如果在使用上有疑问，请在采购前与我们联系，以便提供技术上的协助。

DIMENSIONS 尺寸表 (Unit: mm)

ØDxL	6.3x6	6.3x7.7	8x10/10.5	8x12.5	10x10.5	10x12.8	10x16.5
A	7.3	7.3	9.0	9.0	11.0	11.0	11.0
B	6.6	6.6	8.3	8.3	10.3	10.3	10.3
C	6.6	6.6	8.3	8.3	10.3	10.3	10.3
E	1.9	1.9	3.1	3.1	4.7	4.7	4.7
L	6.0	7.7	10.0/10.5	12.5	10.5	12.8	16.5
H	0.5~0.8	0.5~0.8	0.8~1.1	0.8~1.1	0.8~1.1	0.8~1.1	0.8~1.1

DIMENSIONS & STANDARD RATINGS 规格尺寸及标准参数

WV (V) / Parameter 参数 / Cap. 容量 (μF)		16 (1C)					25 (1E)				
		Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流	Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流
68	680						6.3 × 6	0.14	17	50	900
100	101	6.3 × 6	0.16	16	45	950	6.3 × 7.7	0.14	25	30	1400
150	151						6.3 × 7.7	0.14	37.5	30	1400
220	221	6.3 × 7.7	0.16	35.2	27	1450	8 × 10	0.14	55	27	1600
270	271	8 × 10	0.16	43.2	22	1700					
330	331						8 × 10 (10 × 10.5)	0.14 (0.14)	82.5 (82.5)	27 (20)	1600 (2000)
470	471	8 × 10 (10 × 10.5)	0.16 (0.16)	75.2 (75.2)	22 (18)	1700 (2100)	8 × 12.5 (10 × 10.5)	0.14 (0.14)	117.5 (117.5)	23 (20)	1900 (2000)
680	681						10 × 12.8	0.14	170	15	2700
820	821	8 × 12.5 (10 × 10.5)	0.16 (0.16)	131.2 (131.2)	20 (18)	1850 (2100)					
1000	102						10 × 16.5	0.14	250	11	4000
1500	152	10 × 12.8	0.16	240	14	3000					
1800	182	10 × 16.5	0.16	288	12	3400					

WV (V) / Parameter 参数 / Cap. 容量 (μF)		35 (1V)					50 (1H)				
		Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流	Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流
22	220						6.3 × 6	0.10	11	80	750
27	270						6.3 × 6	0.10	13.5	80	750
33	330						6.3 × 7.7	0.10	16.5	40	1100
47	470	6.3 × 6	0.12	16.45	60	900					
68	680	6.3 × 7.7	0.12	23.8	35	1400	8 × 10	0.10	34	30	1250
100	101	6.3 × 7.7	0.12	35	35	1400	8 × 10 (10 × 10.5)	0.10 (0.10)	50 (50)	30 (25)	1250 (1600)
120	121						8 × 12.5	0.10	60	28	1400
150	151	8 × 10	0.12	52.5	27	1600	10 × 10.5	0.10	75	25	1600
180	181	8 × 10	0.12	63	27	1600					
220	221	8 × 10.5 (8 × 12.5)	0.12 (0.12)	77 (77)	27 (24)	1600 (1800)	10 × 12.8	0.10	110	23	1800
270	271	10 × 10.5	0.12	94.5	20	2000	10 × 16.5	0.10	135	13	3700
330	331	10 × 10.5	0.12	115.5	20	2000					
470	471	10 × 12.8	0.12	164.5	16	2600					
680	680	10 × 16.5	0.12	238	11	4000					

DIMENSIONS & STANDARD RATINGS 规格尺寸及标准参数

WV (V) / Parameter 参数 / Cap. 容量 (μF)		63 (1J)					80 (1K)				
		Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流	Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流
22	220	6.3 × 7.7	0.08	13.86	80	900	8 × 10	0.08	17.6	45	1050
33	330	8 × 10	0.08	20.79	40	1100	8 × 10	0.08	26.4	45	1050
47	470	8 × 10	0.08	29.61	40	1100	8 × 12.5 (10 × 10.5)	0.08 (0.08)	37.6 (37.6)	42 (36)	1200 (1200)
56	560	10 × 10.5	0.08	35.28	30	1400	10 × 10.5	0.08	44.8	36	1200
82	820						10 × 12.8	0.08	65.6	33	1350
100	101	8 × 12.5 (10 × 10.5)	0.08 (0.08)	63 (63)	36 (30)	1300 (1400)	10 × 16.5	0.08	80	20	2200
150	151	10 × 12.8	0.08	94.5	26	1600					
180	181	10 × 16.5	0.08	113.4	15	3500					

WV (V) / Parameter 参数 / Cap. 容量 (μF)		100 (2A)				
		Case size ØDxL 尺寸	Dissipation factor (tan δ) 损耗角正切	Leakage current (μA) 漏电流	ESR (MΩ) max. 20℃, 100KHz 阻抗值	Ripple current (mA rms) 125℃, 100KHz 纹波电流
33	330	10 × 10.5	0.08	33	80	850
47	470	10 × 12.8	0.08	47	60	1050

FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT 纹波电流频率补偿系数

Frequency 频率	120Hz ≤ f ≤ 1KHz	1KHz ≤ f ≤ 10KHz	10KHz ≤ f ≤ 100KHz	100KHz ≤ f ≤ 300KHz
Coefficient 系数	0.10	0.40	0.70	1.00