

ECN/PCN No.: M1202

For Manufacturer

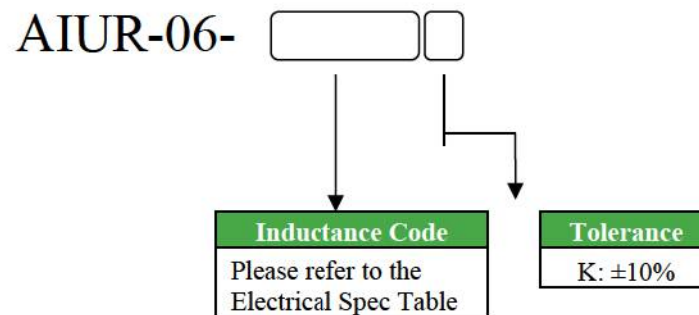
Product Description: Unshielded Radial Power Inductor	Abracon Part Number / Part Series: AIUR-06 Series	☐ Documentation only ☒ ECN ☐ EOL	☒ Series ☐ Part Number(s)
Affected Revision: D	New Revision: E	Application:	☐ Safety ☒ Non-Safety

Prior to Change:

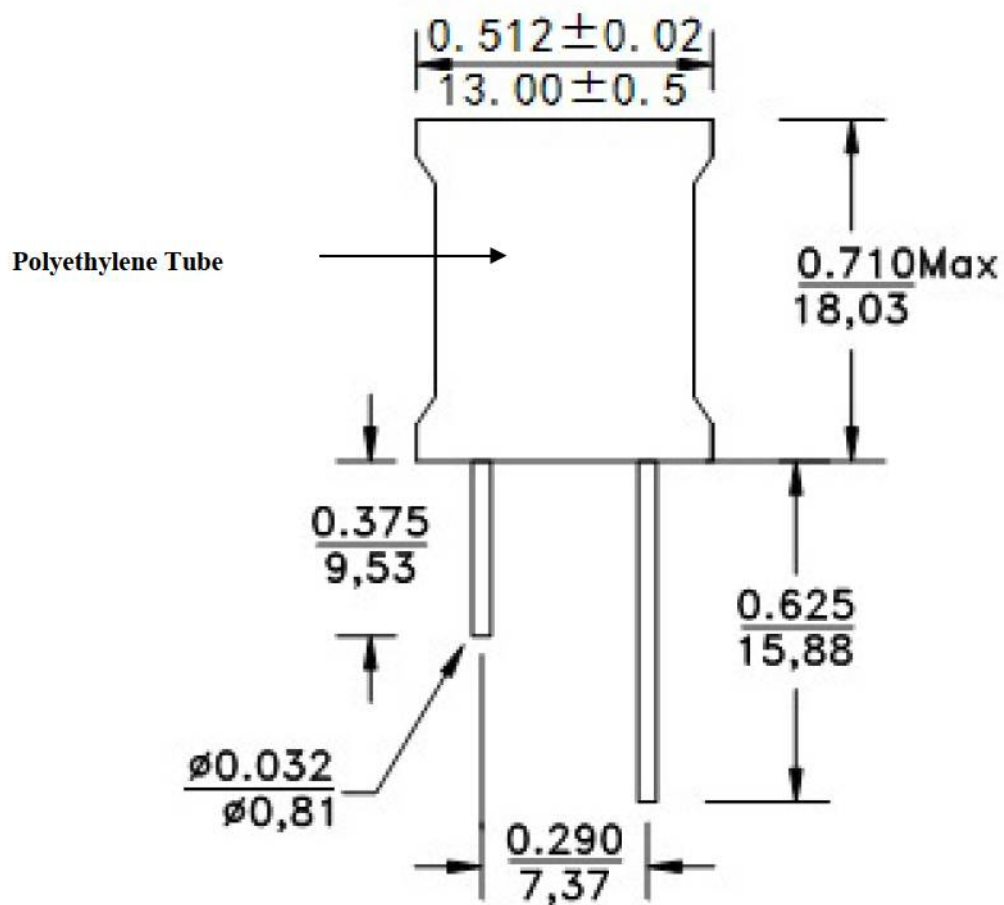
1.0 Key Electrical Specifications

Part Number	Inductance	Tolerance	DCR (Max)	Saturation Current (Max)	Temperature Rise Current (Max)	Inductance Code
Units	μH	%	Ω	A	A	
Symbol	L	K	DCR	Isat	Ibc	
AIUR-06-3R9	3.9	K	0.016	14.2	6.5	3R9K
AIUR-06-4R7	4.7	K	0.018	13.0	6.2	4R7K
AIUR-06-5R6	5.6	K	0.021	11.0	5.9	5R6K
AIUR-06-6R8	6.8	K	0.023	10.0	5.6	6R8K
AIUR-06-8R2	8.2	K	0.026	9.5	5.3	8R2K
AIUR-06-100	10	K	0.031	8.8	5.0	100K
AIUR-06-120	12	K	0.036	7.9	4.6	120K
AIUR-06-150	15	K	0.040	7.1	4.4	150K
AIUR-06-180	18	K	0.041	7.4	4.2	180K
AIUR-06-220	22	K	0.043	6.1	4.0	220K
AIUR-06-270	27	K	0.046	5.5	3.8	270K
AIUR-06-330	33	K	0.051	5.2	3.6	330K
AIUR-06-390	39	K	0.054	4.5	3.3	390K
AIUR-06-470	47	K	0.063	4.1	3.2	470K
AIUR-06-560	56	K	0.075	3.8	2.7	560K
AIUR-06-680	68	K	0.078	3.5	2.4	680K
AIUR-06-820	82	K	0.088	3.1	2.2	820K
AIUR-06-101	100	K	0.108	2.8	2.1	101K
AIUR-06-121	120	K	0.127	2.6	2.0	121K
AIUR-06-151	150	K	0.162	2.4	1.9	151K
AIUR-06-181	180	K	0.228	2.1	1.6	181K
AIUR-06-221	220	K	0.252	1.9	1.5	221K
AIUR-06-271	270	K	0.270	1.75	1.4	271K
AIUR-06-331	330	K	0.394	1.62	1.3	331K
AIUR-06-391	390	K	0.416	1.40	1.1	391K
AIUR-06-471	470	K	0.568	1.30	1.0	471K
AIUR-06-561	560	K	0.650	1.20	0.95	561K
AIUR-06-681	680	K	0.740	1.10	0.82	681K
AIUR-06-821	820	K	1.0	0.96	0.75	821K
AIUR-06-102	1000	K	1.2	0.88	0.65	102K
AIUR-06-122	1200	K	1.5	0.80	0.61	122K
AIUR-06-152	1500	K	1.7	0.72	0.54	152K
AIUR-06-182	1800	K	1.8	0.66	0.46	182K
AIUR-06-222	2200	K	2.4	0.60	0.41	222K
AIUR-06-272	2700	K	2.8	0.54	0.39	272K
AIUR-06-332	3300	K	3.7	0.48	0.35	332K
AIUR-06-392	3900	K	5.0	0.42	0.31	392K
AIUR-06-472	4700	K	5.6	0.40	0.28	472K
AIUR-06-562	5600	K	6.3	0.37	0.25	562K
AIUR-06-682	6800	K	8.4	0.34	0.22	682K
AIUR-06-822	8200	K	9.6	0.31	0.20	822K
AIUR-06-103	10000	K	10.5	0.29	0.16	103K
AIUR-06-123	12000	K	14.5	0.25	0.13	123K
AIUR-06-153	15000	K	20.5	0.23	0.10	153K

- 2.1 Test Conditions and equipments**
 Test frequency: 1kHz, 0.1Vrms
 Isat: max. 10% inductance drop from initial value
 IDC: The DC current at which the temperature rise is 40°C max
- 2.2 Operating Temperature:** -25°C ~ +85°C
- 2.3 Storage Temperature:** -25°C ~ +85°C
- 3.0 Part Number Identification**



4.0 Mechanical Dimensions



Dimension: inch / mm

5.0 Packing (250pcs / Box)

After Change:

2.0 Key Electrical Specifications

Part Number	Inductance	Tolerance	DCR (Max)	Saturation Current (Max)	Temperature Rise Current (Max)	Inductance Code
Units	μH	%	Ω	A	A	
Symbol	L	K	DCR	Isat	Idc	
AIUR-06-3R9	3.9	K	0.016	14.2	6.5	3R9K
AIUR-06-4R7	4.7	K	0.018	13.0	6.2	4R7K
AIUR-06-5R6	5.6	K	0.021	11.0	5.9	5R6K
AIUR-06-6R8	6.8	K	0.023	10.0	5.6	6R8K
AIUR-06-8R2	8.2	K	0.026	9.5	5.3	8R2K
AIUR-06-100	10	K	0.031	8.8	5.0	100K
AIUR-06-120	12	K	0.036	7.9	4.6	120K
AIUR-06-150	15	K	0.040	7.1	4.4	150K
AIUR-06-180	18	K	0.041	7.4	4.2	180K
AIUR-06-220	22	K	0.043	6.1	4.0	220K
AIUR-06-270	27	K	0.046	5.5	3.8	270K
AIUR-06-330	33	K	0.051	5.2	3.6	330K
AIUR-06-390	39	K	0.054	4.5	3.3	390K
AIUR-06-470	47	K	0.063	4.1	3.2	470K
AIUR-06-560	56	K	0.075	3.8	2.7	560K
AIUR-06-680	68	K	0.078	3.5	2.4	680K
AIUR-06-820	82	K	0.088	3.1	2.2	820K
AIUR-06-101	100	J,K	0.108	2.8	2.1	101K
AIUR-06-121	120	J,K	0.127	2.6	2.0	121K
AIUR-06-151	150	J,K	0.162	2.4	1.9	151K
AIUR-06-181	180	J,K	0.228	2.1	1.6	181K
AIUR-06-221	220	J,K	0.252	1.9	1.5	221K
AIUR-06-271	270	J,K	0.270	1.75	1.4	271K
AIUR-06-331	330	J,K	0.394	1.62	1.3	331K
AIUR-06-391	390	J,K	0.416	1.40	1.1	391K
AIUR-06-471	470	J,K	0.568	1.30	1.0	471K
AIUR-06-561	560	J,K	0.650	1.20	0.95	561K
AIUR-06-681	680	J,K	0.740	1.10	0.82	681K
AIUR-06-821	820	J,K	1.0	0.96	0.75	821K
AIUR-06-102	1000	J,K	1.2	0.88	0.65	102K
AIUR-06-122	1200	J,K	1.5	0.80	0.61	122K
AIUR-06-152	1500	J,K	1.7	0.72	0.54	152K
AIUR-06-182	1800	J,K	1.8	0.66	0.46	182K
AIUR-06-222	2200	J,K	2.4	0.60	0.41	222K
AIUR-06-272	2700	J,K	2.8	0.54	0.39	272K
AIUR-06-332	3300	J,K	3.7	0.48	0.35	332K
AIUR-06-392	3900	J,K	5.0	0.42	0.31	392K
AIUR-06-472	4700	J,K	5.6	0.40	0.28	472K
AIUR-06-562	5600	J,K	6.3	0.37	0.25	562K
AIUR-06-682	6800	J,K	8.4	0.34	0.22	682K
AIUR-06-822	8200	J,K	9.6	0.31	0.20	822K
AIUR-06-103	10000	J,K	10.5	0.29	0.16	103K
AIUR-06-123	12000	J,K	14.5	0.25	0.13	123K
AIUR-06-153	15000	J,K	20.5	0.23	0.10	153K

5.1 Test Conditions and equipments

Test frequency: 1kHz, 0.25V_{rms}

Isat: max. 10% inductance drop from initial value

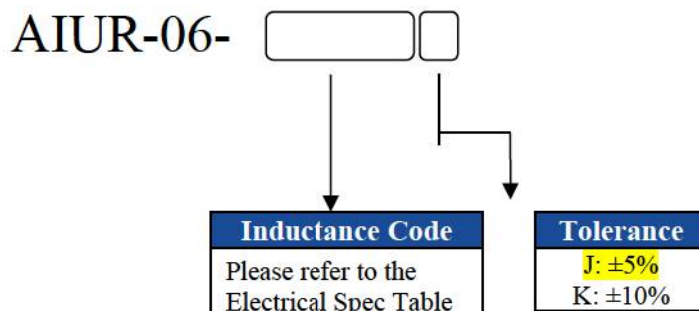
IDC: The DC current at which the temperature rise is 40°C max

5.2 Operating Temperature: -40°C ~ +125°C (Including Self-heating)

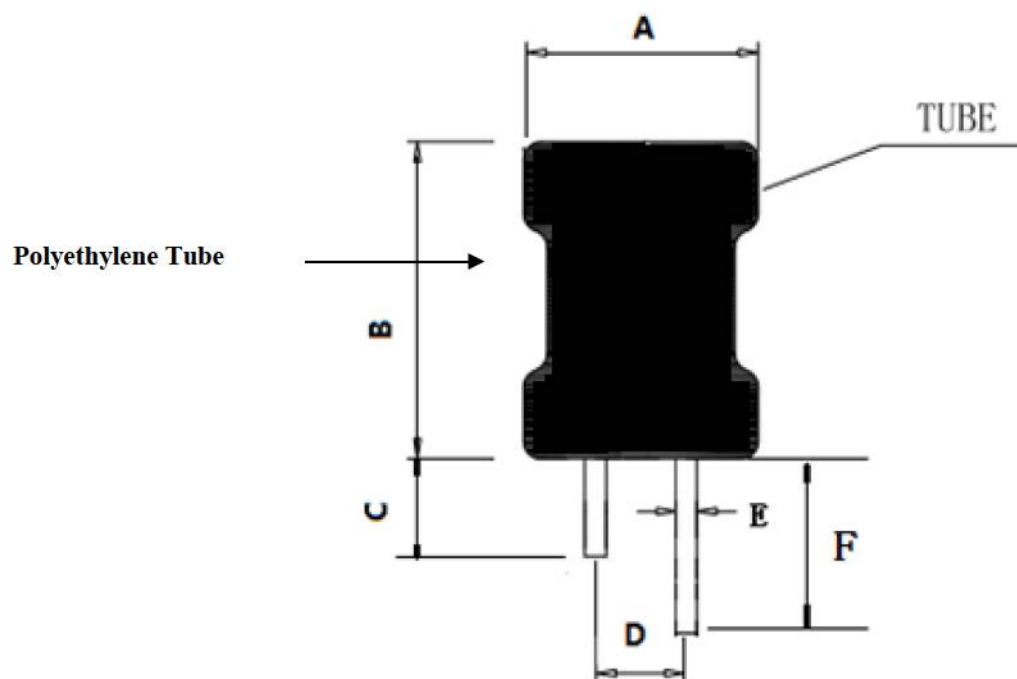
5.3 Storage Temperature: -40°C ~ +125°C

5.4 Operating Voltage (COILS-CORE): 500V MAX

6.0 Part Number Identification



7.0 Mechanical Dimensions



A	B	C	D	E	F
13.5 MAX	18.0 MAX	9.5 ±1	7.5 REF	0.8	15.8 ±1

Dimension: mm

8.0 Packing (200pcs / Bag)

Cause/Reason for Change: Moving the series to a new production line, lower tolerance on some parts, change in operating temperature range, testing conditions and, pcs/bag

Change Plan**Effective Date:**

12/3/2020

Additional Remarks:**Change Declaration:**

The change does not affect form, fit or function of the series. Wider operating temperature, update to the testing conditions, graphics, pcs/Bag.

The tolerance decreased on the following parts:

AIUR-06-101

AIUR-06-121

AIUR-06-151

AIUR-06-181

AIUR-06-221

AIUR-06-271

AIUR-06-331

AIUR-06-391

AIUR-06-471

AIUR-06-561

AIUR-06-681

AIUR-06-821

AIUR-06-102

AIUR-06-122

AIUR-06-152

AIUR-06-182

AIUR-06-222

AIUR-06-272

AIUR-06-332

AIUR-06-392

AIUR-06-472

AIUR-06-562

AIUR-06-682

AIUR-06-822

AIUR-06-103

AIUR-06-123

AIUR-06-153		
Issued Date: 12/3/2020	Issued By: Ahmed Alamin	Issued Department: Engineering
Approval: Syed Raza Engineering VP	Approval: Reuben Quintanilla Quality Director	Approval: Ying Huang Purchasing Director
For Abracon EOL only		
Last Time Buy (if applicable):	Alternate Part Number / Part Series:	
Additional Approval:	Additional Approval:	Additional Approval:
Customer Approval (If Applicable)		
Qualification Status: ☐ Approved ☐ Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
Customer Part Number:	Customer Project:	
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		

Unshielded Radial Power Inductor

AIUR-06 Series



RoHS/RoHS II Compliant



18.03 x ϕ 13.0mm

FEATURES:

- Ferrite core with heat shrink tube
- High Reliability

APPLICATIONS:

- Switching Power Supplies
- Noise Filtering
- DC to DC Converters
- Electronic Household Appliances
- Buzzers and Alarm Systems
- Television and Audio Equipment

ELECTRICAL SPECIFICATIONS:

Part Number	Inductance	Tolerance	DCR (Max)	Saturation Current (Max)	Temperature Rise Current (Max)	Inductance Code
Units	μ H	%	Ω	A	A	
Symbol	L	K	DCR	I _{sat}	I _{DC}	
AIUR-06-3R9	3.9	K	0.016	14.2	6.5	3R9K
AIUR-06-4R7	4.7	K	0.018	13.0	6.2	4R7K
AIUR-06-5R6	5.6	K	0.021	11.0	5.9	5R6K
AIUR-06-6R8	6.8	K	0.023	10.0	5.6	6R8K
AIUR-06-8R2	8.2	K	0.026	9.5	5.3	8R2K
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AIUR-06-120	12	K	0.036	7.9	4.6	120K
AIUR-06-150	15	K	0.040	7.1	4.4	150K
AIUR-06-180	18	K	0.041	7.4	4.2	180K
AIUR-06-220	22	K	0.043	6.1	4.0	220K
AIUR-06-270	27	K	0.046	5.5	3.8	270K
AIUR-06-330	33	K	0.051	5.2	3.6	330K
AIUR-06-390	39	K	0.054	4.5	3.3	390K
AIUR-06-470	47	K	0.063	4.1	3.2	470K
AIUR-06-560	56	K	0.075	3.8	2.7	560K
AIUR-06-680	68	K	0.078	3.5	2.4	680K
AIUR-06-820	82	K	0.088	3.1	2.2	820K
AIUR-06-101	100	J, K	0.108	2.8	2.1	101K
AIUR-06-121	120	J, K	0.127	2.6	2.0	121K
AIUR-06-151	150	J, K	0.162	2.4	1.9	151K
AIUR-06-181	180	J, K	0.228	2.1	1.6	181K
AIUR-06-221	220	J, K	0.252	1.9	1.5	221K
AIUR-06-271	270	J, K	0.270	1.75	1.4	271K
AIUR-06-331	330	J, K	0.394	1.62	1.3	331K
AIUR-06-391	390	J, K	0.416	1.40	1.1	391K
AIUR-06-471	470	J, K	0.568	1.30	1.0	471K
AIUR-06-561	560	J, K	0.650	1.20	0.95	561K
AIUR-06-681	680	J, K	0.740	1.10	0.82	681K
AIUR-06-821	820	J, K	1.0	0.96	0.75	821K
AIUR-06-102	1000	J, K	1.2	0.88	0.65	102K
AIUR-06-122	1200	J, K	1.5	0.80	0.61	122K
AIUR-06-152	1500	J, K	1.7	0.72	0.54	152K
AIUR-06-182	1800	J, K	1.8	0.66	0.46	182K
AIUR-06-222	2200	J, K	2.4	0.60	0.41	222K
AIUR-06-272	2700	J, K	2.8	0.54	0.39	272K
AIUR-06-332	3300	J, K	3.7	0.48	0.35	332K
AIUR-06-392	3900	J, K	5.0	0.42	0.31	392K
AIUR-06-472	4700	J, K	5.6	0.40	0.28	472K
AIUR-06-562	5600	J, K	6.3	0.37	0.25	562K
AIUR-06-682	6800	J, K	8.4	0.34	0.22	682K
AIUR-06-822	8200	J, K	9.6	0.31	0.20	822K
AIUR-06-103	10000	J, K	10.5	0.29	0.16	103K
AIUR-06-123	12000	J, K	14.5	0.25	0.13	123K
AIUR-06-153	15000	J, K	20.5	0.23	0.10	153K

Unshielded Radial Power Inductor

AIUR-06 Series



RoHS/RoHS II Compliant



18.03 x ϕ 13.0mm

Test Conditions and equipments

Test frequency: 1kHz 0.25Vrms

I_{DC}: 10% inductance drops typical

Isat: max. 10% inductance drop from initial value

Operating Temperature: -40°C ~ +125 °C (including self-heating)

Storage Temperature: -40°C ~ +125 °C

Operating Voltage (COILS-CORE): 500V MAX

➤ PART IDENTIFICATION:

AIUR-06-

Packing (200pcs / Bag)

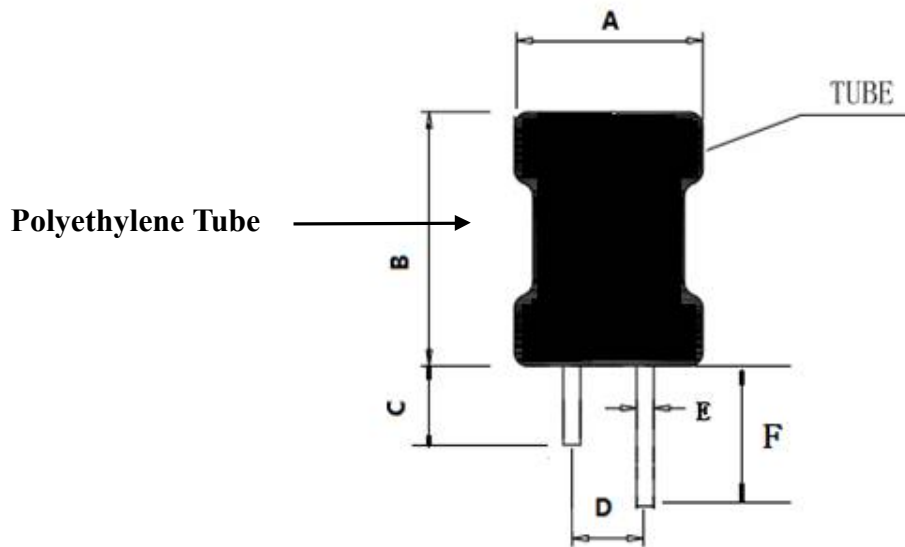
Inductance Code

Please refer to the
Electrical Spec Table

Tolerance

J: ±5%
K: ±10%

➤ OUTLINE DRAWING:



A	B	C	D	E	F
13.5 MAX	18.0 MAX	9.5 ±1	7.5 REF	0.8	15.8 ±1

Dimension: mm

ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.

Affected Part Numbers

AIUR-06-101K
AIUR-06-121K
AIUR-06-151K
AIUR-06-181K
AIUR-06-221K
AIUR-06-271K
AIUR-06-331K
AIUR-06-391K
AIUR-06-471K
AIUR-06-561K
AIUR-06-681K
AIUR-06-821K
AIUR-06-102K
AIUR-06-122K
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AIUR-06-222K
AIUR-06-272K
AIUR-06-332K
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AIUR-06-103K
AIUR-06-123K
AIUR-06-153K
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AIUR-06-4R7K
AIUR-06-5R6K
AIUR-06-6R8K
AIUR-06-8R2K
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AIAP-03-562k
AIAP-03-682k
AIAP-03-822k
AIAP-03-103k
AIAP-03-123k
AIAP-03-153k
AIAP-03-183k
AIAP-03-223k
AIAP-03-273k
AIAP-03-333k
AIAP-03-393k
AIAP-03-473k
AIAP-03-563k
AIAP-03-683k
AIAP-03-823k
AIAP-03-104k
AIAP-03-124k
AISR-01-102J
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AISR-01-152J
AISR-01-182J
AISR-01-222J
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AISR-01-332J
AISR-01-392J
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