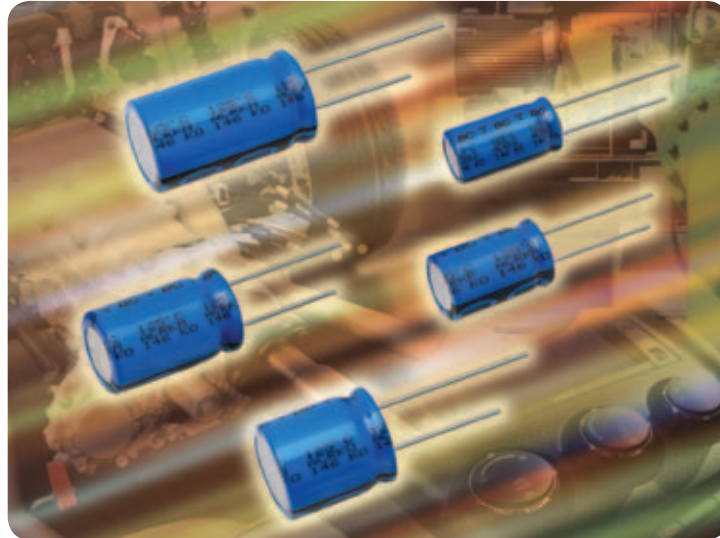


146 RTI Radial Aluminum Capacitors for Advanced Applications



KEY BENEFITS

- Low impedance, high ripple current at high temperature
- Polarized aluminum electrolytic capacitors, non-solid electrolyte
- Radial leads, cylindrical aluminum case with pressure relief, insulated with a blue PET sleeve
- Charge and discharge proof
- Very long useful life: 2500 h to 6000 h at 125 °C, high stability, high reliability
- Very low ESR
- Excellent ripple current capability
- AEC-Q200 qualified

APPLICATIONS

- Electronic circuits in automotive, industrial, and SMPS products
- Filtering of unwanted noise
- Smoothing by DC voltages
- Buffering of energy
- Decoupling of super-imposed AC ripple

Automotive:

- Electro-hydraulic power steering (EHPS)
- Electric power steering (EPS)
- Engine control
- Electric brake (EPB)
- Variable speed ventilation (HVAC)
- Power management and conversion

Industrial

- Variable speed motor control
- Drives
- SMPS, operating in harsh environment
- Variable speed pumps

RESOURCES

- Datasheet: 146 RTI - <http://www.vishay.com/doc?28401>
- For technical questions contact aluminumcaps1@vishay.com
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>

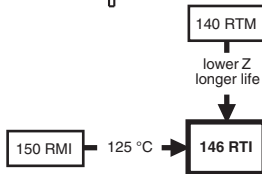
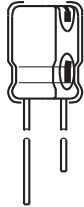


RoHS
COMPLIANT

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components



146 RTI Radial Aluminum Capacitors for Advanced Applications



MARKING

The capacitors are marked (where possible) with the following information:

- Rated capacitance (in μF)
- Tolerance on rated capacitance, code letter in accordance with IEC 60062 (M for $\pm 20\%$)
- Rated voltage (in V)
- Date code, in accordance with IEC 60062
- Code indicating factory of origin
- Logo of manufacturer
- Upper category temperature (125 °C)
- Negative terminal identification
- Series number (146)

QUICK REFERENCE DATA

DESCRIPTION	VALUE
Nominal case sizes ($\varnothing D \times L$ in mm)	10 x 12 to 18 x 35
Rated capacitance range, C_R	68 μF to 6800 μF
Tolerance on C_R	$\pm 20\%$
Rated voltage range, U_R	16 V to 63 V
Category temperature range	- 55 °C to + 125 °C
Endurance test at 125 °C	2000 h to 5000 h
Useful life at 125 °C	2500 h to 6000 h
Useful life at 40 °C, 1.8 x I_R applied	400 000 h
Shelf life at 0 V, 125 °C	1000 h
Based on sectional specification	IEC 60384-4/EN130300
Climatic category IEC 60068	55/125/56

SELECTION CHART FOR C_R , U_R AND RELEVANT NOMINAL CASE SIZES ($\varnothing D \times L$ in mm)

C_R (μF)	U_R (V)				
	16	25	35	50	63
68	-	-	-	-	10 x 20
100	-	-	-	10 x 12	10 x 16
150	-	-	-	-	10 x 20
220	-	-	10 x 12	10 x 16	12.5 x 20
330	-	10 x 12	10 x 16	10 x 20	12.5 x 25
390	-	-	-	-	16 x 20
470	10 x 12	10 x 16	10 x 20	12.5 x 20	18 x 20
560	-	-	-	-	16 x 25
680	10 x 16	10 x 20	12.5 x 20	12.5 x 25	18 x 25
820	-	-	-	16 x 20	16 x 35
1000	10 x 20	12.5 x 20	12.5 x 25	18 x 20	18 x 31
1200	-	-	16 x 20	18 x 25	18 x 35
1500	12.5 x 20	12.5 x 25	18 x 20	16 x 35	-
1800	-	16 x 20	16 x 25	18 x 31	-
2200	12.5 x 25	-	18 x 25	18 x 35	-
2700	-	-	16 x 31	-	-
3300	16 x 20	18 x 20	16 x 35	-	-
3900	-	16 x 25	18 x 31	-	-
4700	18 x 20	16 x 25	18 x 35	-	-
5600	16 x 31	18 x 31	-	-	-
6800	18 x 25	16 x 35	-	-	-

ENDURANCE TEST DURATION AND USEFUL LIFE AS A FUNCTION OF CASE SIZE

NOMINAL CASE SIZE $\varnothing D \times L$ (mm)	CASE CODE	ENDURANCE at 125 °C (h)	USEFUL LIFE at 125 °C (h)
10 x 12	14	2000	2500
10 x 16	15	2000	2500
10 x 20	16	2000	3000
12.5 x 20	17	2000	3000
12.5 x 25	18	3000	5000
16 x 20	19a	3000	4000
16 x 25	19	3000	5000
16 x 31	20	4000	6000
16 x 35	21	5000	6000
18 x 20	1820	3000	4000
18 x 25	1825	3000	5000
18 x 31	1831	4000	6000
18 x 35	22	5000	6000

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