UP36 CAP	UP36 DEG C PER DISSIPATED WATT
35	17.4
30	17.6
20	17.5
14	17.9
10	19.3
7	21.6
4.7	21.8

THESE UNITS INTENDED FOR DC APPLICATIONS ONLY

HOW TO USE THIS TABLE TO CALCULATE YOUR INTERNAL HOT SPOT

1. FROM THE LITERATURE FOR THE UP36 STYLE CHOOSE THE CAP YOU ARE USING AND CHECK THE ESR
2. THE DISSIPATED WATTAGE IN HEAT WILL BE I^2 X ESR
3. LOOK UP THE REFERENCE ABOVE FOR THE DEGREES C RISE PER DISSIPATED WATT
4. MULTIPLY YOUR CALCULATED WATTAGE TIMES THE CORRECT SPEC ABOVE TO GET THE INTERNAL TEMP RISE CREATED BY THE RIPPLE CURRENT FLOW IN THE CAP
5. ADD THE AMBIENT TEMPERATURE AROUND THE CAP TO THE INTERNAL RISE TO FIND THE TEMPERATURE OF THE CAPACITOR CENTER
6. CHECK THE RESPECTIVE LITERATURE TO BE SURE THAT YOU DO NOT EXCEED THE MAXIMUM OPERATING TEMPERATURE OF THE CAPACITOR AND FOR ANY VOLTAGE DERATING SPECIFICATIONS

EXAMPLE: YOU ARE USING A UP36 30uF 600VDC CAP AT 13 AMPS-RMS IN A 35C AMBIENT
FROM THE LITERATURE THE ESR OF THIS UNIT IS 0.011 OHMS
THE DISSIPATED WATTAGE IS 13^2 X 0.011 = 1.859 WATTS
TEMPERATURE RISE IN THE CAP IS THEN 1.859 WATTS X 17.6 DEG C/WATT = 32.7C
THE INTERNAL HOT SPOT OF THE CAP IS THEN 35C (AMB) + 32.7C (RISE) = 67.7C**
IF YOU WERE USING 75% OF RATED VOLTAGE AT 68C THIS UNIT WOULD HAVE APPROXIMATELY 155,000 HOURS LIFE EXPECTANCY

****NOW TO PREDICT THE LIFE EXPECTANCY OF THE UNIT GO TO THE GRAPH BASED ON THE % VOLTAGE USED**

UL30	UL30
	DEG C
CASE	PER DISSIPATED
LENGTH	WATT
3.125	8.6
4.125	6.5
5.125	5.2
6.125	4.4

UL31	UL31
	DEG C
CASE	PER DISSIPATED
LENGTH	WATT
1.575	14.1
2.008	12.2
2.520	10.7

THESE UNITS INTENDED FOR DC APPLICATIONS ONLY

HOW TO USE THESE TABLES TO CALCULATE YOUR INTERNAL HOT SPOT

1. FROM THE LITERATURE FOR THE RESPECTIVE STYLE CHOOSE THE CAP YOU ARE USING AND CHECK THE ESR
2. THE DISSIPATED WATTAGE IN HEAT WILL BE I^2 X ESR
3. LOOK UP THE REFERENCE ABOVE FOR THE DEGREES C RISE PER DISSIPATED WATT
4. MULTIPLY YOUR CALCULATED WATTAGE TIMES THE CORRECT SPEC ABOVE TO GET THE INTERNAL TEMP RISE CREATED BY THE RIPPLE CURRENT FLOW IN THE CAP
5. ADD THE AMBIENT TEMPERATURE AROUND THE CAP TO THE INTERNAL RISE TO FIND THE TEMPERATURE OF THE CAPACITOR CENTER
6. CHECK THE RESPECTIVE LITERATURE TO BE SURE THAT YOU DO NOT EXCEED THE MAXIMUM OPERATING TEMPERATURE OF THE CAPACITOR AND FOR ANY VOLTAGE DERATING SPECIFICATIONS

EXAMPLE: YOU ARE USING A UL31BL356K CAPACITOR (35UF - 1000VDC) AT 43 AMPS-RMS IN A 40C AMBIENT
FROM THE LITERATURE THE ESR OF THIS UNIT IS 0.00102 OHMS IN THE 1.575" HIGH CASE
THE DISSIPATED WATTAGE IS 43^2 X 0.00102 = 1.886 WATTS
TEMPERATURE RISE IN THE CAP IS THEN 1.886 WATTS X 14.1DEG C/WATT = 26.6C
THE INTERNAL HOT SPOT OF THE CAP IS THEN 40C (AMB) + 26.6C (RISE) = 66.6C**
IF YOU WERE USING 75% OF RATED VOLTAGE AT 67C THIS UNIT WOULD HAVE APPROXIMATELY 175,000 HOURS LIFE EXPECTANCY

****NOW TO PREDICT THE LIFE EXPECTANCY OF THE UNIT GO TO THE GRAPH BASED ON THE % VOLTAGE USED**

EXPECTED LIFE VS INTERNAL CASE TEMP AND %RATED VOLTAGE FOR UL30, UL31, AND UP36 STYLE CAPACITORS