C53 DC-Link Capacitor

直流支撑电容器

C53

产品特点.Characteristics

- 聚聚丙烯膜介质;
- 迈拉胶带封装,干式环氧树脂灌注;
- 体积小,安装方便;
- 优异的高频大电流承受能力。

- Polypropylene film dielectric
- Myla tape packaging, sealed with epoxy resin
- Small size and easy installation
- Excellent high frequency and high current bearing capacity

产品应用.Application

- 广泛应用于DC-Link电路中,
  作高频滤波和退耦用;
- 电力电子设备中隔直耦合用。

- Widely used in DC-Link Circuits, as a high frequency
  filtering and decoupling
- Direct Coupling in Power Electronic equipment

性能参数.Technical Data

• 引用标准 Reference Standards	GB/T 17702 IEC 61071
• 工作温度范围 Operating Temperature Range	-40°C~70°C Top max:+85°C
• 容量范围 Capacitance Range	15μF～300μF
• 额定电压 Rated Voltage	600VDC～1200VDC
• 容量偏差 Capacity Tolerance	±5%(J); ±10%(K)
• 极间耐电压 Test voltage between electrodes	1.5Un (DC) 60S 20°C
• 极壳耐电压 Test voltage between electrode and case	1000+2×UN/√2(VAC) 50Hz 60S (min 3000VAC)
• 损耗角正切 Dissipation Factor	tgδ≤2×10-3 at 20°C, 1KHz
• 绝缘电阻 Insulation Resistance	C•R≥5000S, at 100VDC, 20°C, 60S
• 预期寿命 Life Expectancy	100000hrs (Un θhotspot ≤ 70°C)

过压运行.Overvoltage Operation

1.1×U_N	30% of on-load-dur.
1.15×U_N	30 min/day
1.2×U_N	5 min/day
1.3×U_N	1min/day
1.5×U_N	100ms every time, no more than 1000 times during the lifetime

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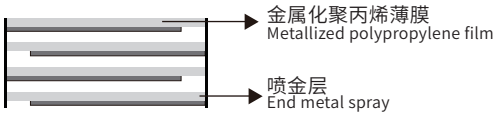
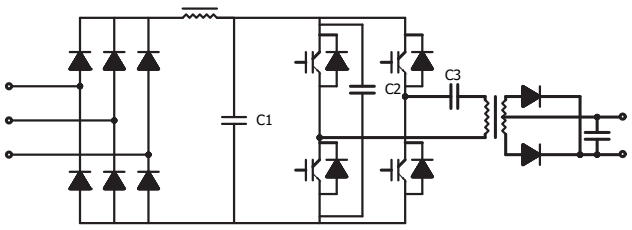
结构图.Construction Diagram

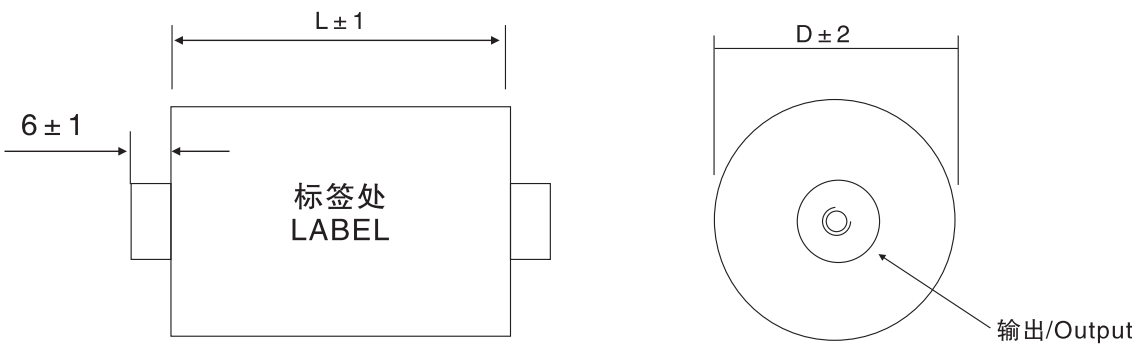


典型线路图.Typical Circuit



全桥逆变焊机、电镀电源（直流）的主电器图中，
C1为C53滤波电容器，C3不耦合电容器
Main electrical diagram of full bridge inverter welder and electroplating power supply (DC) C1 is C53 filter capacitor, C3 coupling capacitor.

产品外形.



产品编码.Product Coding

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
C	5	3	X	X	N	X	X	N	□	□	□	□	□	□	□	–	□	□

01 02 03 — 产品型号 Product model

04 05 06 — 额定电压 Rated voltage
XX*10ⁿ (V)

07 08 09 — 标称容量 Nominal capacity
XX*10ⁿ (pF)

10 — 容量偏差 Capacity deviation

J	±5%
K	±10%

11 — 引出电极 Extraction electrode

P-焊片 P - Soldering lug
F-螺母 F - Nut
W-UL线 W- UL Wire
R-3C线 R- 3C Wire

12 13 14 — 引线形式 Leads form
G01、H01、I01、J01、K01、W01

15 16 — 引线型号 Lead wire type
引线为焊片时，空缺此栏
Leads are soldering lugs, the column is vacant

17 18 19 — 序列号 Serial number
01、02…

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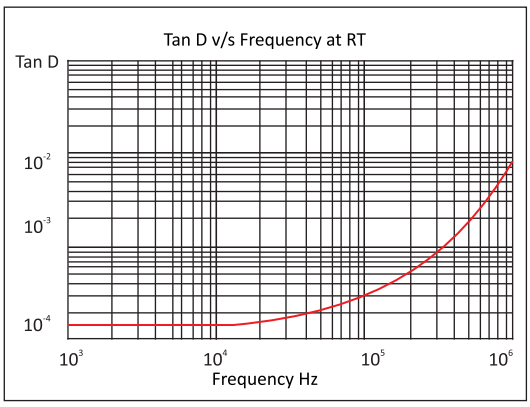
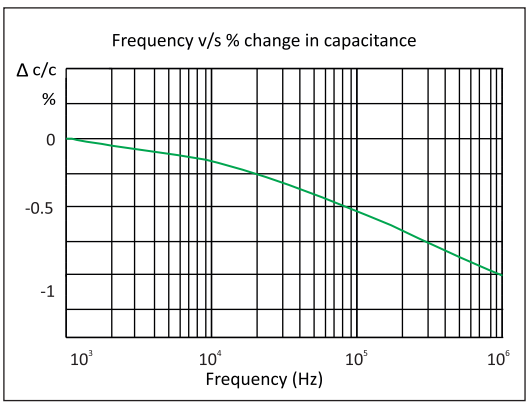
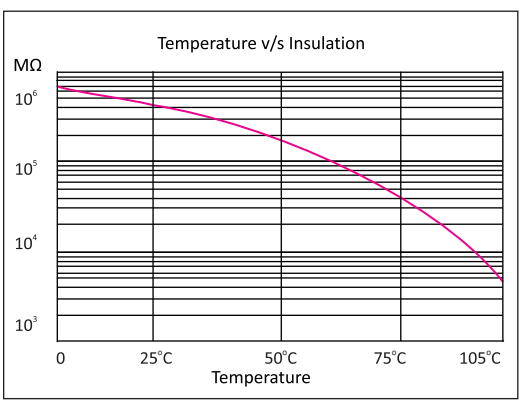
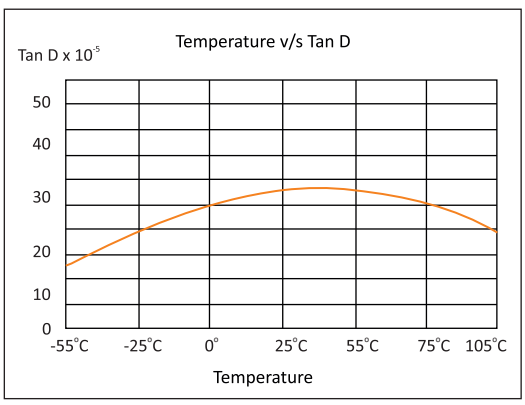
频率特性.Temperature Characteristics

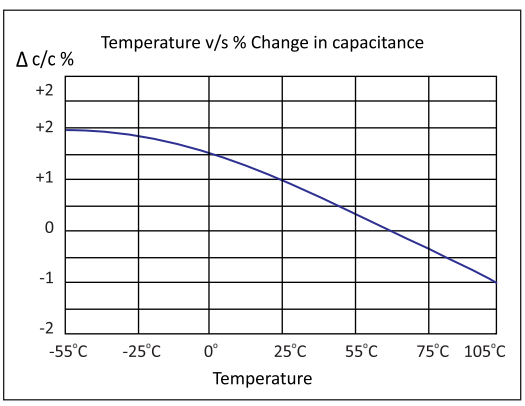




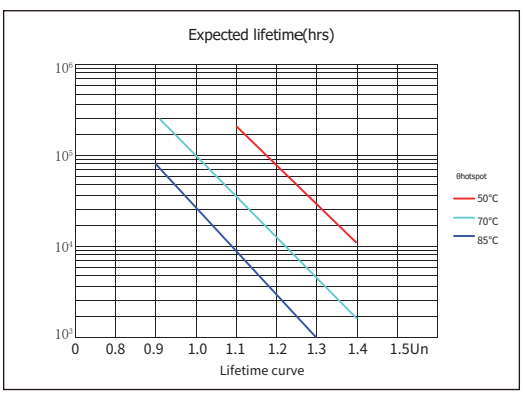
温度特性.Frequency Characteristics







预期寿命 Life Expectancy



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参数表.Article Table

Part Number	CAP μF	Dimension（mm） L	Dimension（mm） D	dv/dt (V/μs)	Ipeak (A)	Irms @10KHz70℃ (A)	ESL (nH)	ESR @1KHz20℃ (mΩ)	Output
U_N 600VDC									
C53601306KF•••••	30	40	45	60	1800	40	25	3.2	M6
C53601506KF•••••	50	50	50	50	2500	40	25	3.0	M6
C53601806KF•••••	80	50	62	40	3200	50	25	3.0	M6
C53601107KF•••••	100	60	60	40	4000	55	25	3.0	M6
C53601157KF•••••	150	60	75	35	5250	70	25	2.5	M8
C53601207KF•••••	200	110	60	25	5000	80	25	2.6	M6
C53601307KF•••••	300	110	72	20	6000	85	25	2.1	M8
U_N 800VDC									
C53801206KF•••••	20	40	44	60	1200	40	25	2.9	M6
C53801306KF•••••	30	50	46	60	1800	45	25	2.7	M6
C53801406KF•••••	40	50	52	60	2400	45	25	2.7	M6
C53801506KF•••••	50	50	59	55	2750	50	25	2.4	M6
C53801107KF•••••	100	60	72	50	5000	65	25	2.2	M8
C53801157KF•••••	150	110	62	30	4500	70	25	2.4	M6
C53801207KF•••••	200	110	71	30	6000	80	25	2.2	M8
U_N 1200VDC									
C53122156KF•••••	15	40	51	70	1050	40	25	3.2	M6
C53122256KF•••••	25	50	54	60	1500	45	25	3.1	M6
C53122406KF•••••	40	50	69	60	2400	60	25	2.7	M6
C53122506KF•••••	50	60	69	50	2500	60	25	2.6	M6
C53122806KF•••••	80	60	86	50	4000	75	25	1.6	M8
C53122107KF•••••	100	110	66	35	3500	70	25	2.5	M6
C53122157KF•••••	150	110	81	35	5250	85	25	2.2	M8

以上表格/图形仅供参考，以实物为准，(单位：mm)
The above table / graphics are for reference only, subject to the actual product (unit: mm)

备注：最大电流Irms为f=10kHz,Tamb=70°C △T≤15°C的值。
Note：Maximum Irms current at 10kH, Tamb=Tamb=70°C △T≤15°C.