

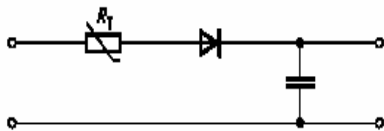


NTC-MF71 Series

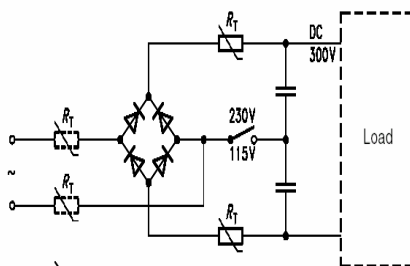
● 抑制浪涌电流工作原理 Inrush current limiting theory

开关电源、电机、变压器等设备，开机瞬间具有很高的浪涌电流，部分元器件可能因此而损伤甚至失效，在电路中串入 MF71 型 NTC 可就以用很低的成本有效抑制浪涌电流。开机瞬间，热敏电阻处于“冷”态具有较高的阻值，对浪涌电流进行有效抑制。随后由于负载电流的作用使热敏电阻自身发热，阻值骤降 10~100 倍，消耗功率减少。当下次开机时，热敏电阻器又自恢复成“冷态”，重复上述过程。

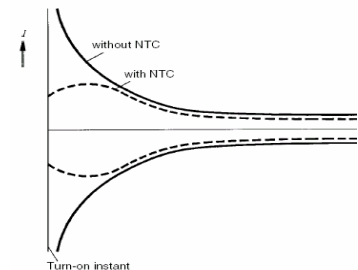
Many items of equipment like switch-mode power supplies, electric motors or transformers exhibit excessive inrush currents when they are turned on, meaning that other components may be damaged or fuses may be tripped. With NTC thermistors it is possible to effectively limit these currents, at attractive cost, by connecting a thermistor in series with the load. The NTC thermistors specially developed for this application limit the current at turn-on by their relatively high cold resistance. As a result of the current load heats up and reduces its resistance by a factor of 10 to 100; the power it draws reduces accordingly. its resistance becomes high when turned off and then repeats the course when turned on again.



Basic circuit diagram for diode protection



Typical example of an inrush protection circuit:



Typical current-time curve

● 特点 FEATRUE:

抑制浪涌电流能力强、稳态功耗低、残余电阻值小
阻值范围和电流范围宽广，系列全

strong inrush current limiting, small steady state power, small residual resistance,
wide range of resistance and current.

● 应用范围 APPLICATION:

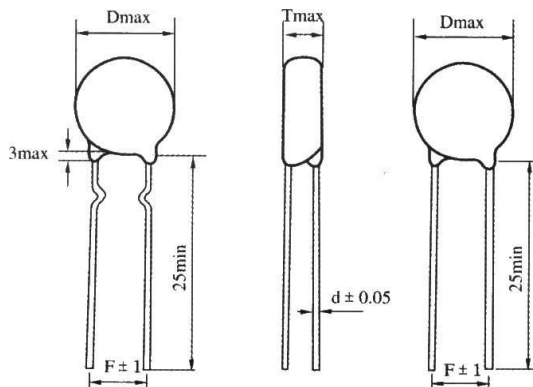
转换电源、开关电源、UPS 电源、加热器、电子节能灯、电子整流器
电源电路、彩色显像管、白炽灯、卤素灯其它照明灯具的灯丝保护。

Inrush current limiting in switch power supplies, UPS power supplies, all kind of heater, electronic energy-saving lamp, electronic implement of scotch current power circuit, color kinescope, fluorescent , projector and halogen lamp, rotational speed limiting in kitchen machines, soft start of motors etc.



NTC-MF71 Series

● 外形尺寸DIMENSION: (UNIT: mm)

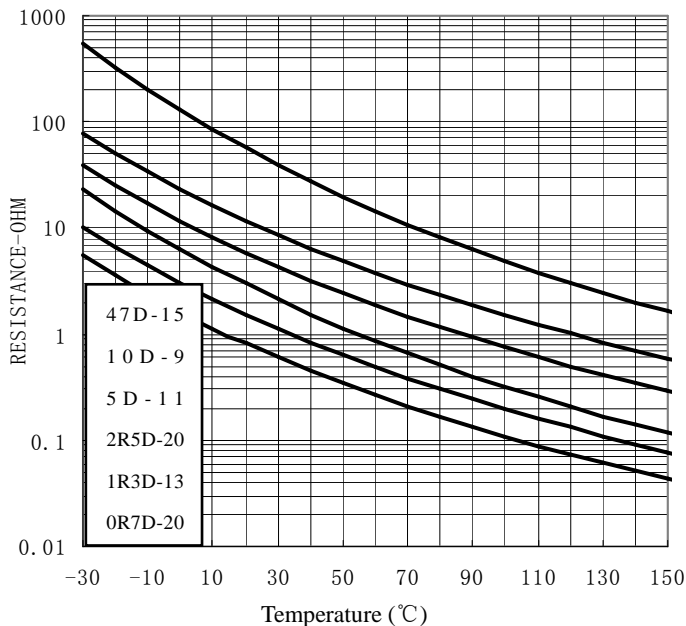


规格	尺寸			
	Dmax	F±1	Tmax	d±0.05
D-5	6.5	5	5	0.6/0.5
D-7	8.5	5	5	0.6/0.5
D-9	9.5	7.5/5	5	0.8/0.6
D-11	11.5	7.5/5	5	0.8
D-13	14.5	7.5	6	0.8
D-15	17.5	7.5	8	0.8
D-20	22.5	7.5/10	8	0.8/1.0

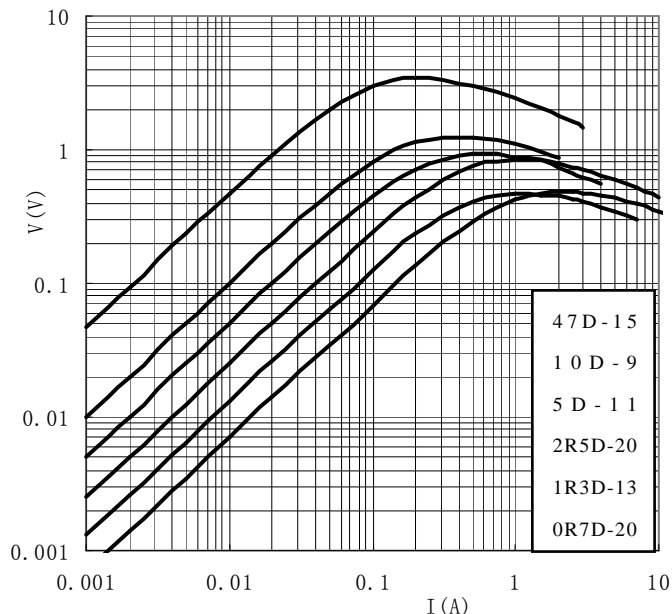
● 典型 R-T、V-I 特性

TYPICAL RESISTANCE-TEMPERATURE
VOLTAGE-CURRENT CHARACTERISTICS

R-T CHARACTERISTICS CURVE



V-I CHARACTERISTICS CURVE





NTC-MF71 Series

主要技术参数 SPECIFICATION

型号规格 Part No. (MF71 / NTC)		额定阻值 Rated Resistance at 25°C	最大 稳态电流 Max. State Current	残余电阻值 Resistance at Imax. (Approx)	耗散系数 Thermal Dissipation Constant	热时间常数 Thermal Time Constant
		R ₂₅	I _{max}	R _I	δ	τ
		(Ω)	(A)	(Ω)	(mW/°C)	(SEC)
Φ5	MF71-5D-5	5	1	0.330	6	20
	MF71-10D-5	10	0.7	0.728	6	20
	MF71-60D-5	60	0.5	1.840	6	20
	MF71-200D-5	200	0.1	6.018	6	20
Φ7	MF71-5D-7	5	2	0.255	8	30
	MF71-10D-7	10	1	0.554	8	30
	MF71-16D-7	16	0.7	1.020	8	30
	MF71-22D-7	22	0.6	1.028	8	30
	MF71-200D-7	200	0.2	6.030	8	30
Φ9	MF71-3D-9	3	3	0.125	11	35
	MF71-4D-9	4	3	0.166	11	35
	MF71-5D-9	5	3	0.200	11	35
	MF71-6D-9	6	3	0.211	11	35
	MF71-8D-9	8	2	0.344	12	35
	MF71-10D-9	10	2	0.431	12	36
	MF71-16D-9	16	2	0.459	12	35
Φ11	MF71-2R5D-11	2.5	5	0.084	13	45
	MF71-3D-11	3	4	0.121	13	45
	MF71-4D-11	4	4	0.132	13	45
	MF71-5D-11	5	4	0.139	13	45
	MF71-6D-11	6	3	0.221	13	45
	MF71-8D-11	8	3	0.240	13	45
	MF71-10D-11	10	3	0.251	14	50
	MF71-12D-11	12	2	0.343	14	50
	MF71-16D-11	16	2	0.512	14	50
	MF71-20D-11	20	2	0.546	14	53
	MF71-22D-11	22	2	0.561	14	53
	MF71-50D-11	50	2	0.634	14	53
	MF71-80D-11	80	1	1.989	14	53
	MF71-120D-11	120	1	2.22	14	53



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型号规格 Part No. (MF71 / NTC)		额定阻值 Rated Resistance at 25°C	最大 稳态电流 Max. State Current	残余电阻值 Resistance at I _{max} (Approx)	耗散系数 Thermal Dissipation Constant	热时间常数 Thermal Time Constant
		R ₂₅	I _{max}	R _t	δ	τ
		(Ω)	(A)	(Ω)	(mW/°C)	(SEC.)
Φ13	MF71-1R3D-13	1.3	7	0.043	13	65
	MF71-2R5D-13	2.5	6	0.065	13	65
	MF71-3D-13	3	6	0.089	13	65
	MF71-4D-13	4	5	0.098	15	68
	MF71-5D-13	5	5	0.107	15	68
	MF71-6D-13	6	5	0.113	15	68
	MF71-8D-13	8	4	0.169	15	68
	MF71-10D-13	10	4	0.180	15	68
	MF71-12D-13	12	3	0.286	15	68
	MF71-16D-13	16	3	0.317	16	68
	MF71-20D-13	20	3	0.311	16	65
	MF71-25D-13	25	2.5	0.432	16	65
Φ15	MF71-1R3D-15	1.3	8	0.046	18	68
	MF71-2R5D-15	2.5	8	0.050	18	70
	MF71-3D-15	3	7	0.063	18	76
	MF71-4D-15	4	6	0.086	18	76
	MF71-5D-15	5	6	0.098	20	76
	MF71-6D-15	6	5	0.135	20	80
	MF71-8D-15	8	5	0.146	20	80
	MF71-10D-15	10	5	0.155	20	80
	MF71-12D-15	12	4	0.225	20	82
	MF71-16D-15	16	4	0.217	20	78
	MF71-20D-15	20	4	0.230	20	80
	MF71-25D-15	25	3	0.379	20	82
	MF71-47D-15	47	3	0.494	23	85
	MF71-80D-15	80	2.5	0.605	20	78
	MF71-120D-15	120	2	0.985	20	81
MF71-220D-15	220	1	3.150	20	90	
Φ20	MF71-0R7D-20	0.7	12	0.027	25	98
	MF71-1R3D-20	1.3	10	0.041	24	104
	MF71-2R5D-20	2.5	10	0.044	24	105
	MF71-2R5D-20	2.5	12	0.032	25	98
	MF71-5D-20	5	7	0.090	24	112
	MF71-8D-20	8	6	0.115	24	98
	MF71-10D-20	10	6	0.122	24	100
	MF71-12D-20	12	6	0.128	24	100
MF71-120D-20	120	2	1.076	24	103	

注：可制作 Φ5~25mm, R₂₅ 为 0.5~220Ω, I_{max} 为 0.1~20A 的产品
 Note: Size: Φ5~25mm, rated resistance range:0.5~220Ω, I_{max} range:0.1~20A