

负温度系数(NTC)热敏电阻器

Negative Temperature Coefficient (NTC) Thermistor

MF72功率型NTC热敏电阻器系列

MF72 Series NTC Thermistor for Inrush Current Limiting

● 特点

- ◎ 体积小、功率大，抑制浪涌电流能力强
- ◎ 反应速度快
- ◎ 材料常数（B值）大，残余电阻小
- ◎ 寿命长，可靠性高
- ◎ 系列全，应用范围宽

● 应用范围

- ◎ 转换电源，开关电源，UPS电源
- ◎ 电子节能灯，镇流器及各类加热器
- ◎ 各类显像管、显示器
- ◎ 白炽灯，其它照明灯具

● 安规认证 Certifications



UL1434 认证
UL1434 Certification
(File# E241319)



CQC认证
CQC Certification
(File# 04001010556)



TUV认证
TUV Certification
(File# R50245892)

● Features

- ◎ Compact size, High power, Excellent surge current suppression.
- ◎ Fast response time.
- ◎ High material constant (B value), Low residual resistance.
- ◎ Long lifespan, High reliability.
- ◎ Full range series and versatile applications.

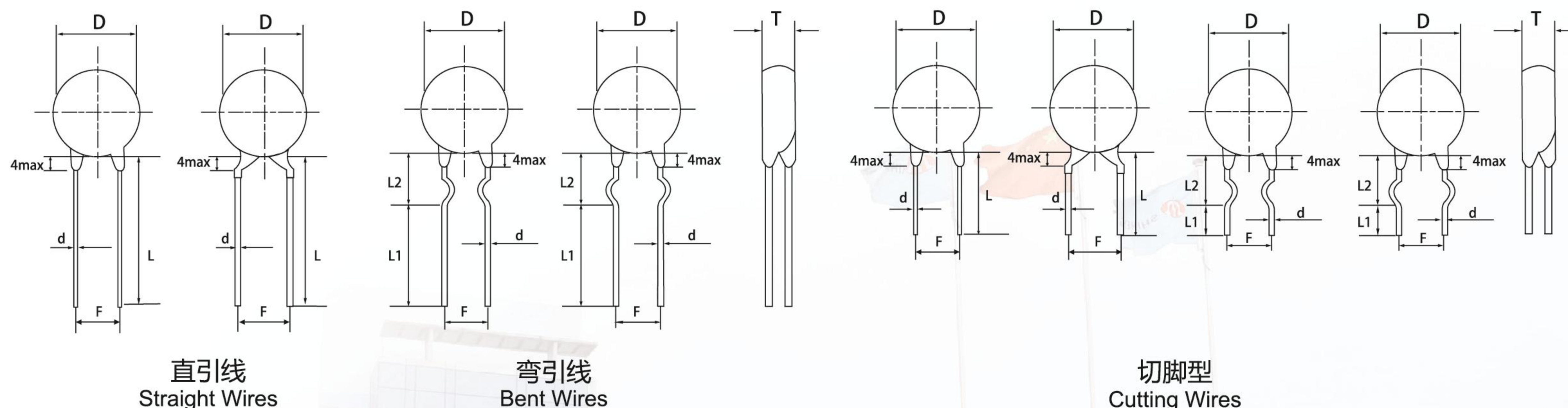
● Applications

- ◎ Converters, switching power supplies, UPS systems.
- ◎ Electronic energy-saving lamps, ballasts, various electric heaters.
- ◎ Various cathode ray tubes, displays.
- ◎ Incandescent lamps and other lighting fixtures.

● 产品标志说明 Marking Instruction



● 外形尺寸 Dimensions (mm)



尺寸 Dim. (mm) 型号 Part No.	代号 Code	Dmax	Tmax	d±0.05	F±0.5	Lmin	弯引线 Bent Wires	
							L1min	L2±2
MF72 □D3		4.5	4.5	0.45	2.5	25	20/5	5
MF72 □D5		6.0	5	0.6/0.45	5/2.5	25	20/5	5
MF72 □D7		8.0	5	0.6	5	25	20/5	5
MF72 □D9		10.0	5.5	0.8/0.6	7.5/5	25	20/5	5
MF72 □D11		12.0	5.5	0.8	7.5/5	25	20/5	5
MF72 □D13		14.0	6	0.8	7.5/5.0	25	20/5	5
MF72 □D15		16.0	6	0.8	10/7.5	25	20/5	5
MF72 □D20		21.0	7	1.0	10/7.5	25	/	/
MF72 □D25		27.5	8	1.0	10/7.5	25	/	/

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MF72 Series NTC Thermistor for Inrush Current Limiting

● 主要技术参数 Main Technical Specifications

工作温度 Operating Temperature (°C): D3~D7mm: -40~+150°C D9~D11mm: -40~+170°C D13~D25mm: -40~+200°C

型号 Part No.	R ₂₅ ±20% (Ω)	25°C时最大稳态电流 Max. Steady-state Current at 25°C	最大电流时近似电阻值 Approx. Resistance at Max. Current	耗散系数约 Dissipation Constant Approx.	热时间常数约 Thermal Time Constant Approx.	最大冲击电容量 Max. Capacitance at 240 VAC	产品认证 Product Certification		
		I _{max} (A)	R _{I_{max}} (Ω)	δ (mW/°C)	τ (s)	(μF)	CQC	TUV	UL/CUL
MF72 0.7D3	0.7	1	0.112	5	15	47			
MF72 1D3	1	0.9	0.13	5	15	47			
MF72 1.5D3	1.5	0.9	0.158	5	15	47			
MF72 2.5D3	2.5	0.7	0.22	5	15	47			
MF72 5D3	5	0.5	0.45	5	15	47			
MF72 0.7D5	0.7	2	0.1	6	20	100	√	√	
MF72 1D5	1	1.8	0.115	6	20	100	√	√	
MF72 1.5D5	1.5	1.8	0.13	6	20	100	√	√	√
MF72 2D5	2	1.5	0.15	6	20	100	√	√	
MF72 2.5D5	2.5	1.5	0.17	6	20	100	√	√	
MF72 3D5	3	1.5	0.19	6	20	100	√	√	√
MF72 3.3D5	3.3	1.5	0.202	6	20	100	√	√	
MF72 3.5D5	3.5	1.5	0.215	6	20	100	√	√	
MF72 4D5	4	1.2	0.252	6	20	100	√	√	
MF72 5D5	5	1	0.353	6	20	100	√	√	√
MF72 7D5	7	0.8	0.575	6	20	100	√	√	
MF72 8D5	8	0.8	0.675	6	20	100	√	√	√
MF72 10D5	10	0.7	0.771	6	20	100	√	√	√
MF72 12D5	12	0.7	0.845	6	20	100	√	√	
MF72 15D5	15	0.6	1.102	6	20	100	√	√	
MF72 16D5	16	0.6	1.198	6	20	100	√	√	√
MF72 20D5	20	0.5	1.253	6	20	100	√	√	√
MF72 22D5	22	0.5	1.273	6	20	100	√	√	
MF72 30D5	30	0.4	1.304	6	20	47	√	√	
MF72 33D5	33	0.4	1.324	6	20	47	√	√	
MF72 36D5	36	0.4	1.394	6	20	47	√	√	
MF72 45D5	45	0.4	1.528	6	18	47	√	√	
MF72 47D5	47	0.4	1.625	6	18	47	√	√	
MF72 50D5	50	0.4	1.658	6	18	47	√	√	
MF72 60D5	60	0.3	1.878	6	18	47	√	√	
MF72 100D5	100	0.3	2.852	6	18	47	√	√	
MF72 200D5	200	0.1	6.259	6	18	47	√	√	√
MF72 220D5	220	0.1	6.859	6	18	47	√	√	
MF72 300D5	300	0.08	10.321	6	18	47	√	√	
MF72 0.7D7	0.7	2.2	0.082	10	30	150	√	√	
MF72 1D7	1	2.2	0.12	10	30	150	√	√	√
MF72 1.5D7	1.5	2.2	0.16	10	30	150	√	√	√
MF72 2.5D7	2.5	2	0.19	10	30	150	√	√	√
MF72 3D7	3	2	0.218	10	30	150	√	√	√
MF72 4.7D7	4.7	2	0.27	10	30	150	√	√	√
MF72 5D7	5	2	0.283	10	30	150	√	√	√
MF72 7D7	7	1	0.483	9	28	100	√	√	
MF72 8D7	8	1	0.539	9	28	100	√	√	√
MF72 10D7	10	1	0.616	9	27	100	√	√	√
MF72 12D7	12	1	0.816	9	27	100	√	√	
MF72 15D7	15	0.7	1.003	9	27	68	√	√	
MF72 16D7	16	0.7	1.003	9	27	68	√	√	√
MF72 20D7	20	0.6	1.102	9	27	68	√	√	√
MF72 22D7	22	0.6	1.108	9	27	68	√	√	√
MF72 30D7	22	0.6	1.128	9	27	68	√	√	
MF72 33D7	33	0.5	1.485	10	28	68	√	√	√
MF72 50D7	50	0.5	1.653	10	28	68	√	√	√
MF72 60D7	60	0.4	1.728	11	28	68	√	√	√

注：若非特别指出，R₂₅的允许偏差为±20%
Note: Unless otherwise specified, the allowable tolerance for R₂₅ is ±20%.

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工作温度 Operating Temperature (°C): D3~D7mm: -40~+150°C D9~D11mm: -40~+170°C D13~D25mm: -40~+200°C

型号 Part No.	R ₂₅ ±20% (Ω)	25°C时最大稳态电流 Max. Steady-state Current at 25°C	最大电流时近似电阻值 Approx. Resistance at Max. Current	耗散系数约 Dissipation Constant Approx.	热时间常数约 Thermal Time Constant Approx.	最大冲击电容量 Max. Capacitance at 240 VAC	产品认证 Product Certification		
		I _{max} (A)	R _I max (Ω)	δ (mW/°C)	τ (s)	(μF)	CQC	TUV	UL/CUL
MF72 85D7	85	0.4	2.536	11	28	68	√	√	
MF72 100D7	100	0.4	2.983	11	28	68	√	√	√
MF72 150D7	150	0.3	11.65	11	28	68	√	√	
MF72 200D7	200	0.2	11.65	11	28	68	√	√	√
MF72 0.7D9	0.7	4.8	0.062	11	35	220	√	√	
MF72 1D9	1	4.5	0.073	11	35	220	√	√	
MF72 1.5D9	1.5	4.5	0.082	11	35	220	√	√	√
MF72 2.5D9	2.5	4	0.113	11	35	220	√	√	√
MF72 3D9	3	4	0.12	11	35	220	√	√	√
MF72 4D9	4	3	0.19	11	35	220	√	√	√
MF72 5D9	5	3	0.21	11	34	220	√	√	√
MF72 6D9	6	2	0.315	11	34	150	√	√	√
MF72 7D9	7	2	0.345	11	34	150	√	√	
MF72 8D9	8	2	0.4	11	32	150	√	√	√
MF72 10D9	10	2	0.458	11	32	150	√	√	√
MF72 12D9	12	1	0.652	11	32	150	√	√	√
MF72 15D9	15	1	0.752	11	31	150	√	√	
MF72 16D9	16	1	0.802	11	31	150	√	√	√
MF72 20D9	20	1	0.864	11	30	150	√	√	√
MF72 22D9	22	1	0.95	11	30	150	√	√	√
MF72 25D9	25	1	0.98	11	30	150	√	√	
MF72 30D9	30	1	1.022	11	30	150	√	√	√
MF72 33D9	33	1	1.124	11	30	150	√	√	√
MF72 47D9	47	1	1.25	11	30	150	√	√	
MF72 50D9	50	1	1.252	11	30	150	√	√	√
MF72 60D9	60	0.8	1.502	11	31	150	√	√	√
MF72 80D9	80	0.8	2.01	11	30	68	√	√	√
MF72 120D9	120	0.8	3.015	11	30	68	√	√	√
MF72 200D9	200	0.5	5.007	11	32	47	√	√	√
MF72 220D9	220	0.5	5.55	11	32	47	√	√	
MF72 300D9	300	0.3	15.55	11	32	47	√	√	
MF72 400D9	400	0.2	30.3	11	32	47	√	√	√
MF72 0.7D11	0.7	5.5	0.04	13	43	470	√	√	
MF72 1D11	1	5	0.052	13	43	470	√	√	√
MF72 1.3D11	1.3	5	0.06	13	43	470	√	√	
MF72 1.5D11	1.5	5	0.065	13	43	470	√	√	√
MF72 2D11	2	5	0.085	13	43	470	√	√	
MF72 2.5D11	2.5	5	0.095	13	43	470	√	√	√
MF72 3D11	3	5	0.1	13	43	470	√	√	√
MF72 4D11	4	4	0.15	13	44	330	√	√	√
MF72 4.7D11	4.7	4	0.155	13	44	330	√	√	
MF72 5D11	5	4	0.156	13	45	330	√	√	√
MF72 6D11	6	3	0.24	13	45	220	√	√	√
MF72 6.8D11	6.8	3	0.245	13	45	220	√	√	
MF72 7D11	7	3	0.25	13	45	220	√	√	√
MF72 8D11	8	3	0.255	14	47	220	√	√	√
MF72 10D11	10	3	0.275	14	47	220	√	√	√
MF72 12D11	12	2	0.462	14	48	220	√	√	√
MF72 13D11	13	2	0.465	14	50	220	√	√	
MF72 15D11	15	2	0.468	14	50	220	√	√	
MF72 16D11	16	2	0.47	14	50	220	√	√	√
MF72 20D11	20	2	0.512	15	52	220	√	√	√
MF72 22D11	22	2	0.563	15	52	220	√	√	√

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工作温度 Operating Temperature (°C): D3~D7mm: -40~+150°C D9~D11mm: -40~+170°C D13~D25mm: -40~+200°C

型号 Part No.	R ₂₅ ±20% (Ω)	25°C时最大稳态电流 Max. Steady-state Current at 25°C	最大电流时近似电阻值 Approx. Resistance at Max. Current	耗散系数约 Dissipation Constant Approx.	热时间常数约 Thermal Time Constant Approx.	最大冲击电容量 Max. Capacitance at 240 VAC	产品认证 Product Certification		
		I _{max} (A)	R _{I_{max}} (Ω)	δ (mW/°C)	τ (s)	(μF)	CQC	TUV	UL/CUL
MF72 25D11	25	2	0.623	15	52	220	√	√	
MF72 30D11	30	1.5	0.667	15	52	220	√	√	√
MF72 33D11	33	1.5	0.734	15	52	220	√	√	√
MF72 47D11	47	1.5	1.002	15	52	220	√	√	
MF72 50D11	50	1.5	1.021	15	52	220	√	√	√
MF72 60D11	60	1.5	1.215	15	52	220	√	√	√
MF72 80D11	80	1.2	1.656	15	52	150	√	√	√
MF72 100D11	100	1.1	2.053	15	50	150	√	√	√
MF72 120D11	120	1.1	2.253	15	50	150	√	√	
MF72 150D11	150	1	3.121	15	50	150	√	√	
MF72 200D11	200	1	4.121	13	50	150	√	√	
MF72 400D11	400	0.5	9.252	13	50	100	√	√	
MF72 0.7D13	0.7	7.5	0.045	13	60	560	√	√	
MF72 1D13	1	7	0.052	13	60	560	√	√	
MF72 1.3D13	1.3	7	0.062	13	60	560	√	√	√
MF72 1.5D13	1.5	7	0.073	13	60	560	√	√	√
MF72 2.5D13	2.5	6	0.088	13	60	560	√	√	√
MF72 3D13	3	6	0.092	14	60	560	√	√	√
MF72 4D13	4	5	0.12	15	67	560	√	√	√
MF72 5D13	5	5	0.125	15	68	560	√	√	√
MF72 6D13	6	4	0.17	15	65	330	√	√	√
MF72 7D13	7	4	0.188	15	65	330	√	√	√
MF72 8D13	8	4	0.194	15	60	330	√	√	√
MF72 10D13	10	4	0.206	15	65	330	√	√	√
MF72 12D13	12	3	0.316	16	65	330	√	√	√
MF72 15D13	15	3	0.335	16	60	330	√	√	√
MF72 16D13	16	3	0.338	16	60	330	√	√	√
MF72 18D13	18	3	0.356	16	60	330	√	√	
MF72 20D13	20	3	0.372	16	65	330	√	√	√
MF72 22D13	22	2.5	0.405	16	65	330	√	√	
MF72 25D13	25	2.5	0.422	16	65	330	√	√	
MF72 30D13	30	2.5	0.517	16	65	330	√	√	√
MF72 33D13	33	2.5	0.592	16	65	330	√	√	
MF72 47D13	47	2	0.81	17	65	220	√	√	√
MF72 60D13	60	1.8	1.012	17	65	220	√	√	
MF72 80D13	80	1.5	1.423	17	65	220	√	√	
MF72 100D13	100	1.2	1.823	17	65	220	√	√	
MF72 120D13	120	1.2	2.124	17	65	220	√	√	√
MF72 0.5D15	0.5	9	0.03	18	68	680	√	√	
MF72 0.7D15	0.7	9	0.035	18	68	680	√	√	√
MF72 1D15	1	8	0.042	18	68	680	√	√	√
MF72 1.3D15	1.3	8	0.048	18	68	680	√	√	√
MF72 1.5D15	1.5	8	0.052	18	69	680	√	√	√
MF72 2D15	2	8	0.062	18	69	680	√	√	
MF72 2.5D15	2.5	7	0.065	18	76	680	√	√	√
MF72 3D15	3	7	0.075	18	76	680	√	√	√
MF72 3.3D15	3.3	6.5	0.085	18	76	680	√	√	
MF72 4D15	4	6	0.095	18	76	680	√	√	
MF72 5D15	5	6	0.112	20	76	680	√	√	√
MF72 6D15	6	5	0.155	20	80	470	√	√	√
MF72 7D15	7	5	0.173	20	80	470	√	√	√
MF72 8D15	8	5	0.178	20	80	470	√	√	√
MF72 10D15	10	5	0.18	20	75	470	√	√	√

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型号 Part No.	R ₂₅ ±20% (Ω)	25°C时最大稳态电流 Max. Steady-state Current at 25°C	最大电流时近似电阻值 Approx. Resistance at Max. Current	耗散系数约 Dissipation Constant Approx.	热时间常数约 Thermal Time Constant Approx.	最大冲击电容量 Max. Capacitance at 240 VAC	产品认证 Product Certification		
		I _{max} (A)	R _I max (Ω)	δ (mW/°C)	τ (s)	(μF)	CQC	TUV	UL/CUL
MF72 12D15	12	4	0.25	20	75	470	√	√	√
MF72 15D15	15	4	0.268	21	85	470	√	√	√
MF72 16D15	16	4	0.276	21	70	470	√	√	√
MF72 20D15	20	4	0.288	21	86	470	√	√	√
MF72 22D15	22	3.5	0.308	21	86	330	√	√	
MF72 25D15	25	3.5	0.358	21	86	330	√	√	
MF72 30D15	30	3.5	0.438	21	75	330	√	√	√
MF72 33D15	33	3.5	0.478	21	75	330	√	√	
MF72 47D15	47	3	0.68	21	86	330	√	√	√
MF72 55D15	55	3	0.72	21	86	330	√	√	
MF72 100D15	100	1.8	1.523	22	87	330	√	√	
MF72 120D15	120	1.8	1.652	22	87	330	√	√	√
MF72 0.7D20	0.7	11	0.018	24	89	1000	√	√	√
MF72 1D20	1	9	0.03	24	89	1000	√	√	
MF72 1.3D20	1.3	9	0.037	24	88	1000	√	√	√
MF72 1.5D20	1.5	9	0.038	24	88	1000	√	√	
MF72 2D20	2	9	0.042	24	88	1000	√	√	
MF72 2.5D20	2.5	8	0.052	24	88	820	√	√	
MF72 3D20	3	8	0.055	24	88	820	√	√	√
MF72 4D20	4	7	0.078	24	87	820	√	√	
MF72 5D20	5	7	0.087	24	87	820	√	√	√
MF72 6D20	6	6	0.113	25	103	680	√	√	√
MF72 7D20	7	6	0.128	25	103	680	√	√	
MF72 8D20	8	6	0.142	25	105	680	√	√	√
MF72 10D20	10	6	0.162	25	102	680	√	√	√
MF72 12D20	12	5	0.195	25	100	680	√	√	√
MF72 15D20	15	5	0.205	25	100	680	√	√	
MF72 16D20	16	5	0.212	25	100	680	√	√	√
MF72 18D20	18	4.5	0.232	25	100	680	√	√	
MF72 20D20	20	4.5	0.248	25	105	680	√	√	
MF72 22D20	22	4.5	0.268	25	105	680	√	√	
MF72 25D20	25	4	0.302	26	115	680	√	√	
MF72 30D20	30	4	0.355	26	115	680	√	√	√
MF72 47D20	47	4	0.612	25	113	680	√	√	√
MF72 120D20	120	2.5	1.628	28	120	680	√	√	√
MF72 0.7D25	0.7	12	0.014	30	120	1200	√	√	√
MF72 1D25	1	11	0.02	30	121	1200	√	√	√
MF72 1.5D25	1.5	10	0.027	30	121	1200	√	√	√
MF72 2D25	2	10	0.034	32	124	1000	√	√	
MF72 2.5D25	2.5	9	0.034	32	124	1000	√	√	√
MF72 3D25	3	9	0.044	32	124	1000	√	√	√
MF72 5D25	5	8	0.07	32	125	1000	√	√	√
MF72 7D25	7	7	0.101	33	125	820	√	√	
MF72 8D25	8	7	0.114	33	125	820	√	√	√
MF72 10D25	10	7	0.13	32	127	820	√	√	√
MF72 12D25	12	6	0.156	32	126	820	√	√	√
MF72 15D25	15	6	0.158	35	126	820	√	√	√
MF72 16D25	16	6	0.16	35	126	820	√	√	√
MF72 20D25	20	6	0.21	35	126	820	√	√	√
MF72 120D25	120	3	1.528	35	126	820	√	√	

注：若非特别指出，R₂₅的允许偏差为±20%
Note: Unless otherwise specified, the allowable tolerance for R₂₅ is ±20%.