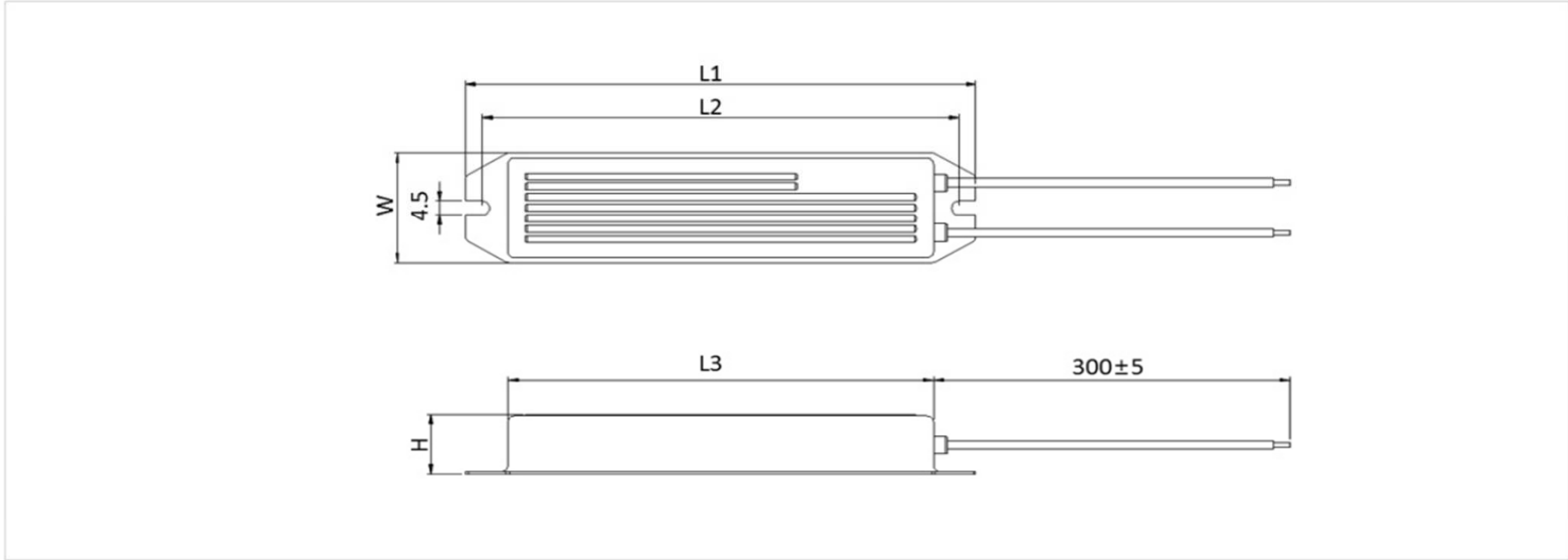


외형도



	L1±1mm	L2±1mm	L3±1mm	W1±0.5mm	H±1mm	Weight(g) ±10%
MCRA-80	150	140	125	35	19	0.13
MCRA-80	150	140	125	35	19	0.13
MCRA-120	182	172	150	43	20	185
MCRA-120	182	172	150	43	20	185
MCRA-150S	182	172	150	43	13	185
MCRA-200	230	220	200	60	20	400

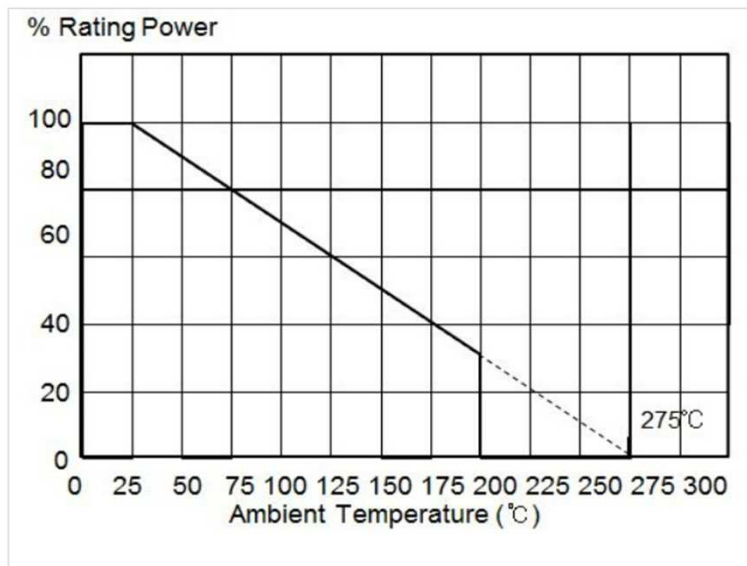
사양 및 성능

특성	규격	테스트 방법
정격저항 및 저항오차	허용오차 F($\pm 1\%$), G($\pm 2\%$), H($\pm 3\%$), J($\pm 5\%$), K($\pm 10\%$)	
온도특성	$\pm 260\text{ppm}/^\circ\text{C max.}$	
정격부하	표면온도상승(temperature) 450°C max.	
단시간부하	아크, 소손 등의 이상이 없을 것.($0.5\% + 0.05\Omega$)	
절연저항	$100\text{M}\Omega \text{ min.}$	DC 500V
내전압	AC 2,500V 이상	AC 2,500V 1 minute
고열노출	마킹, 절연코팅에 현저한 손상 없음. ($0.5\% + 0.05\Omega$)	275°C 2 hours
열충격	기계적 손상이 없을 것.($0.5\% + 0.05\Omega$)	a.Continuous 1) $-55 : 30\text{min}$ 2) $25 : 5\text{min}$ 3) $155 : 30\text{min}$ 4) $25 : 5\text{min}$
저온보관	기계적 손상이 없을 것. ($0.5\% + 0.05\Omega$)	40°C 24hours \rightarrow 25°C 2~8 hours

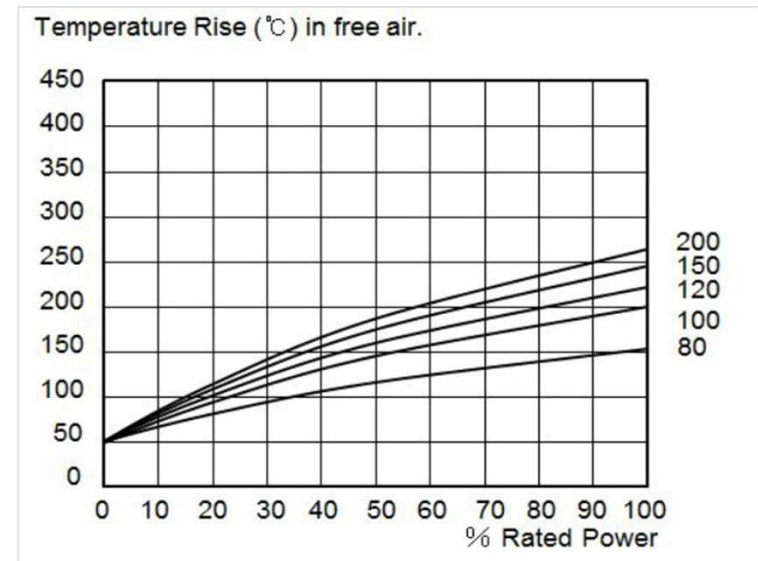
정격전력과 저항

Model	Rated Wattage	Resistance Value(Ω)		Tolerance
		W	N	
MCRA-80	80W	0.1~1.0K	0.1~200K	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRA-80	100W	0.1~1.2K	0.1~350	
MCRA-120	120W	0.1~1.5K	0.1~500	
MCRA-150	150W	0.1~1.5K	0.1~500	
MCRA-150S	150W	0.1~1.5K	0.1~500	
MCRA-200	200W	0.1~1.2K	0.1~1.0K	

부하경감곡선



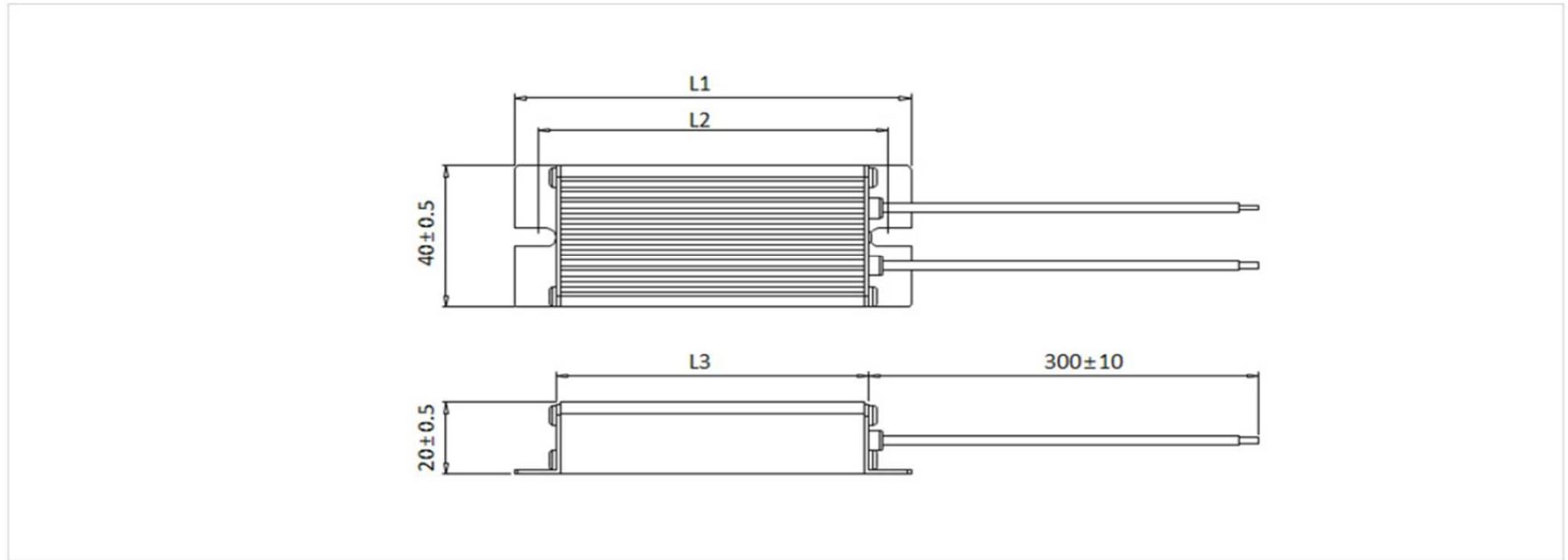
온도상승



주문방법

MCRA	120W	N	50Ω	J	T 145	300														
형명	전격 전력	<table border="1"> <tr> <th colspan="2">권선형식</th> </tr> <tr> <td>N</td> <td>무유도저항</td> </tr> <tr> <td>-</td> <td>일반</td> </tr> </table>	권선형식		N	무유도저항	-	일반	저항값	저항오차	<table border="1"> <tr> <th colspan="2">온도 Sensor Type</th> </tr> <tr> <td>T145</td> <td>145°C</td> </tr> <tr> <td>T200</td> <td>200°C</td> </tr> <tr> <td>-</td> <td>내장하지않음</td> </tr> </table>	온도 Sensor Type		T145	145°C	T200	200°C	-	내장하지않음	<p>외부배선방법 300 - Wire 길이를 표시단위[mm]</p>
권선형식																				
N	무유도저항																			
-	일반																			
온도 Sensor Type																				
T145	145°C																			
T200	200°C																			
-	내장하지않음																			

외형도



	L1±1mm	L2±1mm	L3±1mm	Weight(g) ±10%
MCRB-60	104	92	82	150
MCRB-150	186	174	164	280
MCRB-200	290	275	268	450

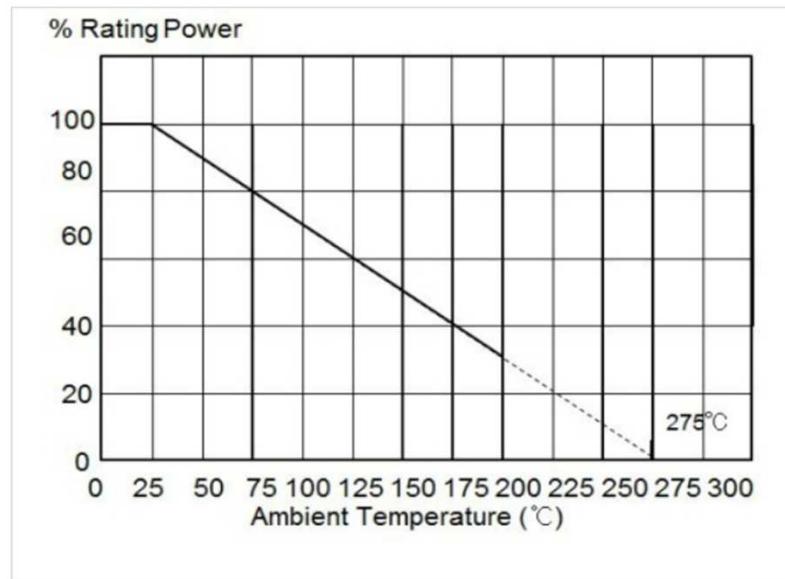
사양 및 성능

특성	규격	테스트 방법
정격저항 및 저항오차	허용오차 ± 1% (F) ± 5% (J) ± 10% (K)	
온도특성	±260ppm/°C max.	
정격부하	표면온도상승(temperature) 450°C max.	
단시간부하	아크, 소손 등의 이상이 없을 것. (0.5% + 0.05Ω)	
절연저항	20MΩ min.	DC 500V
내전압	기계적 손상 및 절연파괴가 없을 것.(0.5% + 0.05Ω)	AC 2,500V 1 minute
고열노출	마킹, 절연코팅에 현저한 손상 없음. (0.5% + 0.05Ω)	275°C 2 hours
열충격	기계적 손상이 없을 것.(0.5% + 0.05Ω)	a.Continuous 1) -55 : 30min 2) 25 : 5min 3) 155 : 30min 4) 25 : 5min
저온보관	기계적 손상이 없을 것. (0.5% + 0.05Ω)	40°C 24hours -> 25°C 2~8 hours

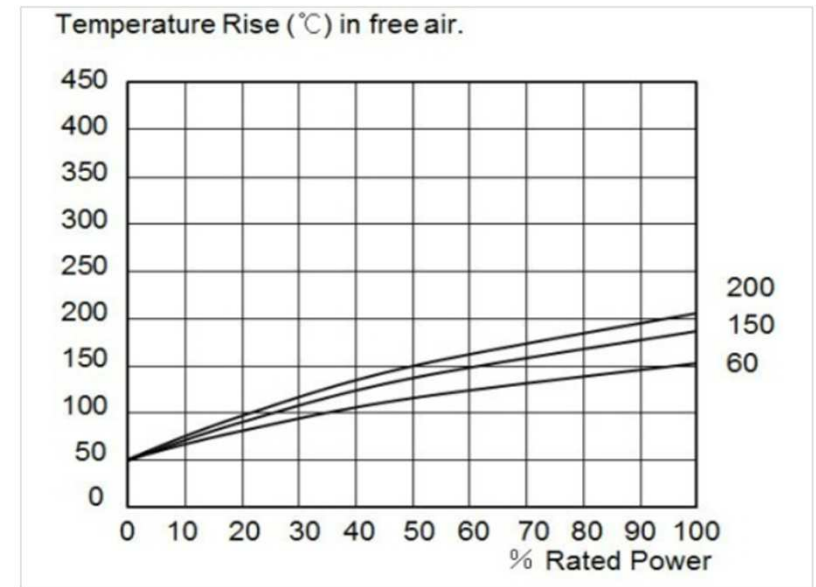
정격전력과 저항

Model	Rated Wattage	Resistance Value(Ω)		Tolerance
		W	N	
MCRB-60	80W	0.1~1K	0.1~200	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRB-150	150W	0.1~1.5K	0.1~500	
MCRA-200	200W	0.1~2K	0.1~1K	

부하경감곡선



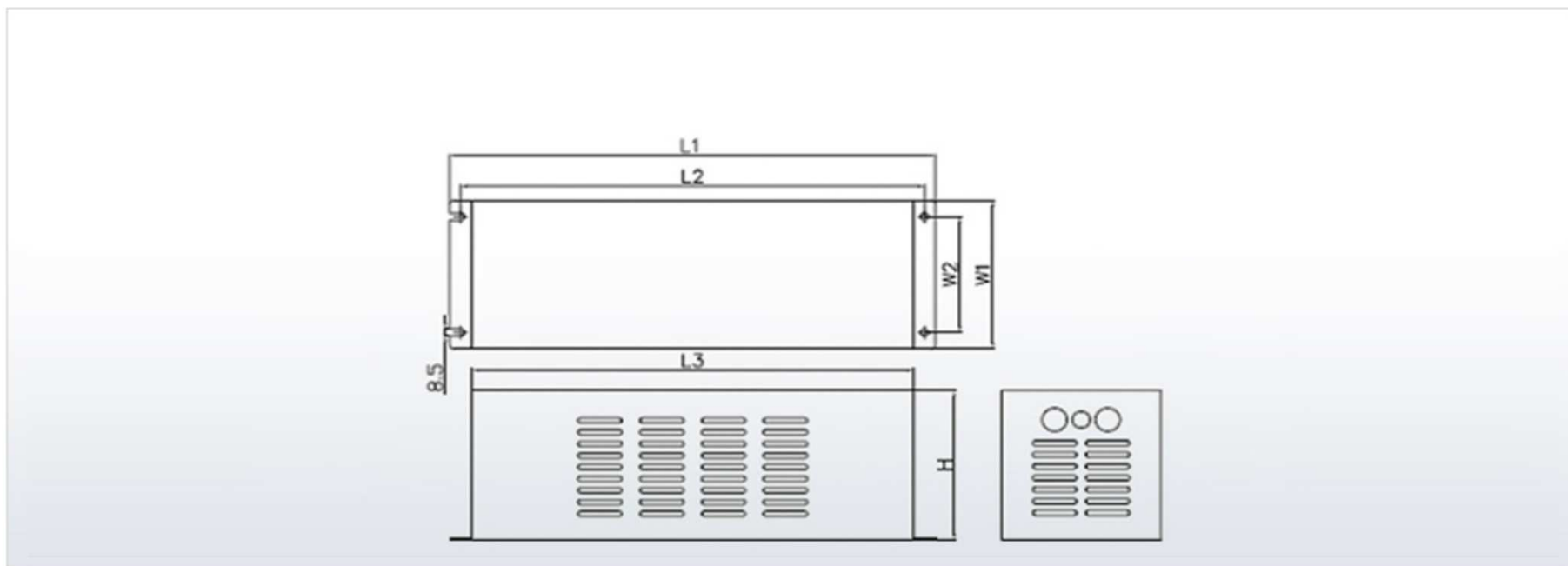
온도상승



주문방법

형명	정격전력	저항값	저항오차
MCRB	60W	20 Ω	J

외형치수



Model	L1±2mm	L2±2mm	L3±2mm	W1±2mm	W2±2mm	H±2mm
MCRF(JC)-ST 2K	550	530	503	180	140	126
MCRF(JC)-ST 2.4K	550	530	503	180	140	126
MCRF(JC)-ST 3K	550	530	503	260	220	126
MCRF(JC)-ST 3.6K	550	530	503	260	220	126
MCRF(JC)-ST 4K	550	530	503	180	140	182
MCRF(JC)-ST 4.8K	550	530	503	180	140	182
MCRF(JC)-ST 5K	550	530	503	180	140	182
MCRF(JC)-ST 6K	550	530	503	260	220	182
MCRF(JC)-ST 6.4K	550	530	503	260	220	182
MCRF(JC)-ST 7.2K	550	530	503	260	220	182
MCRF(JC)-ST 8K	550	530	503	260	220	252
MCRF(JC)-ST 9.6K	550	530	503	260	220	252
MCRF(JC)-ST 10K	550	530	503	260	220	252
MCRF(JC)-ST 12K	550	530	503	260	220	322
MCRF(JC)-ST 15K	550	530	503	260	220	322
MCRF(JC)-ST 18K	550	530	503	260	220	392

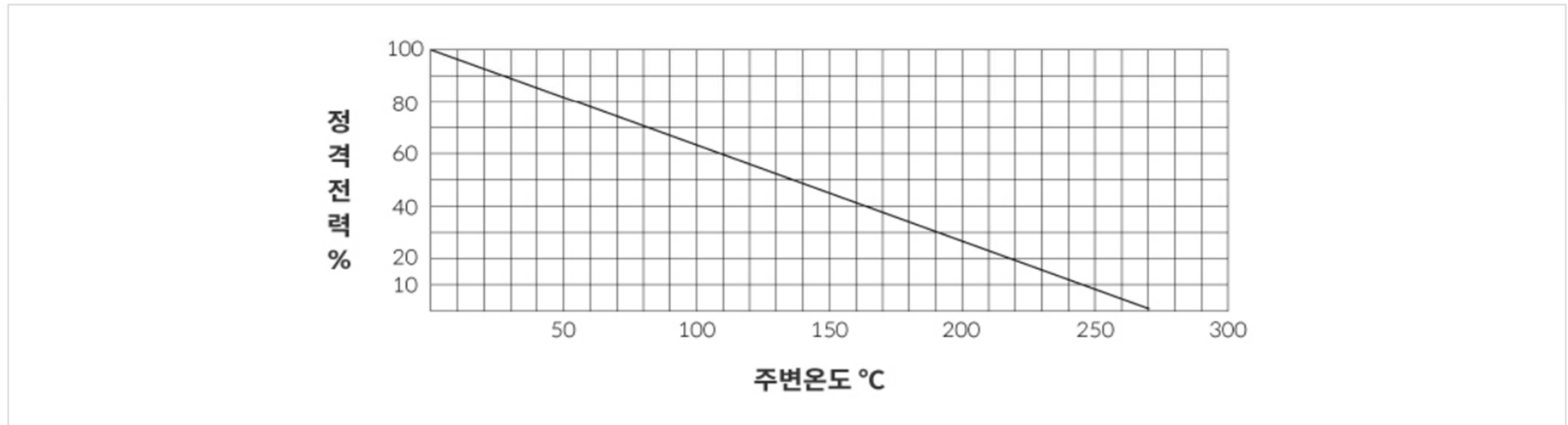
일반규격

모델명	정격 전력	저항값(Ω)		저항오차
		W	N	
MCRF(JC)-ST 2kW	2.0kW	0.1~5.0k	0.1~2.0k	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRF(JC)-ST 2.4K	2.4kW	0.1~5.0k	0.1~2.0k	
MCRF(JC)-ST 3K	3.0kW	0.1~7.0k	0.1~3.0k	
MCRF(JC)-ST 3.6K	3.6kW	0.1~7.0k	0.1~3.0k	
MCRF(JC)-ST 4K	4.0kW	0.1~8.0k	0.1~4.0k	
MCRF(JC)-ST 4.8K	2.8kW	0.1~8.0k	0.1~4.0k	
MCRF(JC)-ST 5K	5.0kW	0.1~8.0k	0.1~4.0k	
MCRF(JC)-ST 6K	6.0kW	0.1~10k	0.1~5.0k	
MCRF(JC)-ST 6.4K	6.4kW	0.1~10k	0.1~5.0k	
MCRF(JC)-ST 7.2K	7.2kW	0.1~10k	0.1~5.0k	
MCRF(JC)-ST 8.0K	8.0kW	0.1~12k	0.1~6.0k	
MCRF(JC)-ST 9.6K	9.6kW	0.1~13k	0.1~6.0k	
MCRF(JC)-ST 10K	10kW	0.1~13k	0.1~6.0k	
MCRF(JC)-ST 12K	12kW	0.1~15k	0.1~6.0k	
MCRF(JC)-ST 15K	15kW	0.1~17k	0.1~8.0k	
MCRF(JC)-ST 18K	18kW	0.1~20k	0.1~1.0k	

전기적 특성

항목	특성
사용온도	-55°C ~ 200°C
절연저항	20MΩ 이상
내전압	AC 2,500V / 1 Min
온도계수	±260 ppm/°C max

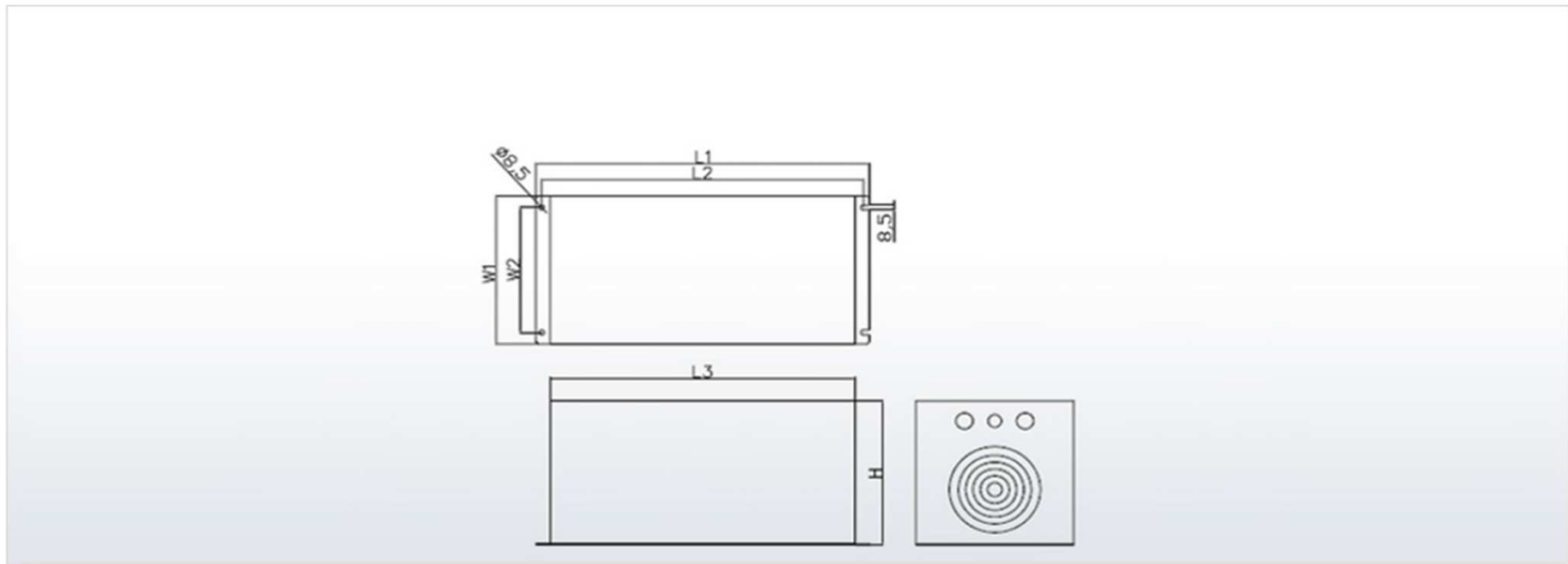
전력저감 곡선



주문방법

MCRF-ST	10kW	N	20Ω	J	T 145		
형명	전격 전력	권선형식		저항값	저항오차	온도 Sensor Type	
		N	무유도저항			T145	145°C
		-	일반			T200	200°C
						-	내장하지않음

외형치수



Model	L1±2mm	L2±2mm	L3±2mm	W1±2mm	W2±2mm	H±2mm
MCRF(JC)-STF 2K	550	530	503	180	140	126
MCRF(JC)-STF 2.4K	550	530	503	180	140	126
MCRF(JC)-STF 3K	550	530	503	260	220	126
MCRF(JC)-STF 3.6K	550	530	503	260	220	126
MCRF(JC)-STF 4K	550	530	503	180	140	182
MCRF(JC)-STF 4.8K	550	530	503	180	140	182
MCRF(JC)-STF 5K	550	530	503	180	140	182
MCRF(JC)-STF 6K	550	530	503	260	220	182
MCRF(JC)-STF 6.4K	550	530	503	260	220	182
MCRF(JC)-STF 7.2K	550	530	503	260	220	182
MCRF(JC)-STF 8K	550	530	503	260	220	252
MCRF(JC)-STF 9.6K	550	530	503	260	220	252
MCRF(JC)-STF 10K	550	530	503	260	220	252
MCRF(JC)-STF 12K	550	530	503	260	220	322
MCRF(JC)-STF 15K	550	530	503	260	220	322
MCRF(JC)-STF 18K	550	530	503	260	220	392

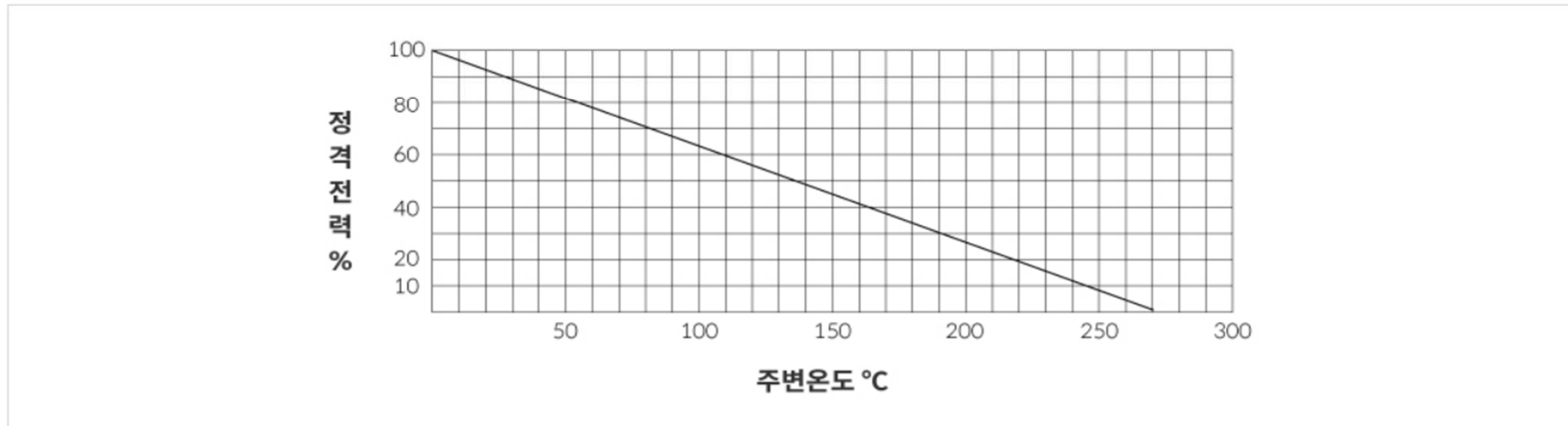
일반규격

모델명	정격 전력	저항값(Ω)		저항오차
		W	N	
MCRF(JC)-STF 2kW	2.0kW	0.1~5.0k	0.1~2.0k	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRF(JC)-STF 2.4K	2.4kW	0.1~5.0k	0.1~2.0k	
MCRF(JC)-STF 3K	3.0kW	0.1~7.0k	0.1~3.0k	
MCRF(JC)-STF 3.6K	3.6kW	0.1~7.0k	0.1~3.0k	
MCRF(JC)-STF 4K	4.0kW	0.1~8.0k	0.1~4.0k	
MCRF(JC)-STF 4.8K	4.8kW	0.1~8.0k	0.1~4.0k	
MCRF(JC)-STF 5K	5.0kW	0.1~8.0k	0.1~4.0k	
MCRF(JC)-STF 6K	6.0kW	0.1~10k	0.1~5.0k	
MCRF(JC)-STF 6.4K	6.4kW	0.1~10k	0.1~5.0k	
MCRF(JC)-STF 7.2K	7.2kW	0.1~10k	0.1~5.0k	
MCRF(JC)-STF 8.0K	8.0kW	0.1~12k	0.1~6.0k	
MCRF(JC)-STF 9.6K	9.6kW	0.1~13k	0.1~6.0k	
MCRF(JC)-STF 10K	10kW	0.1~13k	0.1~6.0k	
MCRF(JC)-STF 12K	12kW	0.1~15k	0.1~6.0k	
MCRF(JC)-STF 15K	15kW	0.1~17k	0.1~8.0k	
MCRF(JC)-STF 18K	18kW	0.1~20k	0.1~1.0k	

전기적 특성

항목	특성
사용온도	-55°C ~ 200°C
절연저항	20MΩ 이상
내전압	AC 2,500V / 1 Min
온도계수	±260 ppm/°C max

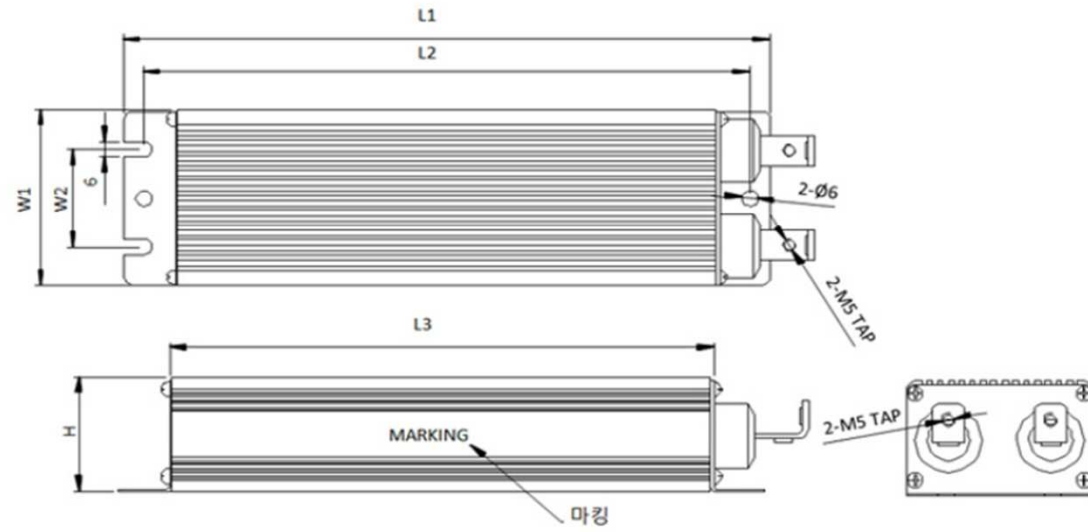
전력저감 곡선



주문방법

MCRJC-STF	10kW	N	20Ω	J	T 145	T 220		
형명	전격 전력	For Non-inductive	저항값	저항오차	온도 Sensor Type		Fan input power	
					T145	145°C	F110	AC110V
					T200	200°C	F220	AC220V
					-	내장하지않음	24V	DC24V

외형도

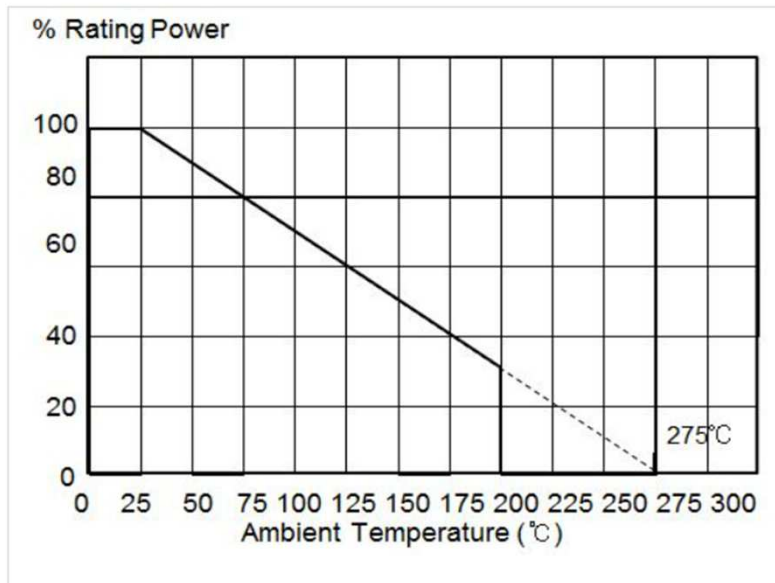


	L1±1mm	L2±1mm	L3±1mm	W1±0.5mm	W2±0.5mm	H±1mm	Weight(g) ±10%
MCRF-300	190	175	152	70	39	45	0.9
MCRF-400	200	205	182	70	39	45	1.1
MCRF-500	240	225	202	70	39	45	1.2
MCRF-600	260	245	222	70	39	45	1.3
MCRF-800	300	285	262	70	39	45	1.5
MCRF-1000	340	325	302	70	39	45	1.8
MCRF-1000	400	385	362	70	39	45	2.1
MCRF-1500	440	425	402	70	39	45	2.3
MCRF-2000	510	495	472	70	39	45	2.8

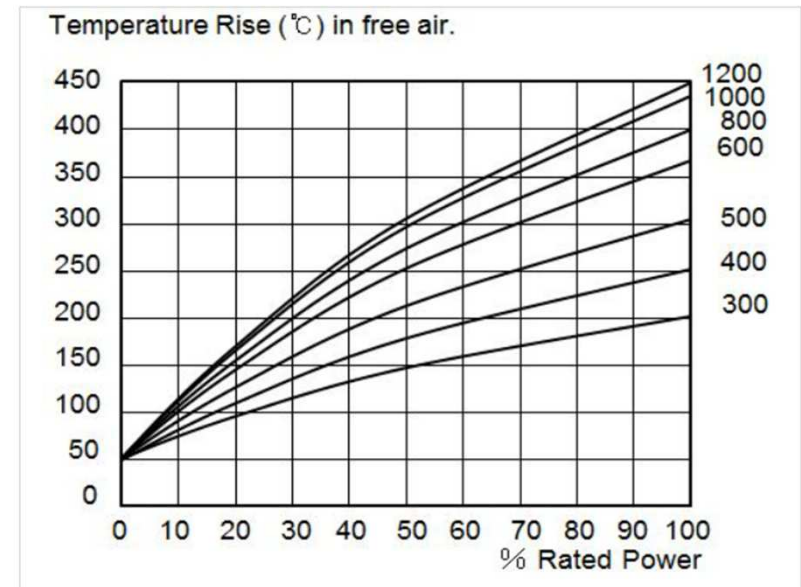
사양 및 성능

특성	규격	테스트 방법
정격저항 및 저항오차	허용오차 ± 1% (F) ± 5% (J) ± 10% (K)	
온도특성	±260ppm/°C max.	
정격부하	표면온도상승(temperature) 450°C max.	
단시간부하	아크, 소손 등의 이상이 없을 것.(0.5% + 0.05Ω)	
절연저항	100MΩ min.	DC1,000V
내전압	기계적 손상 및 절연파괴가 없을 것.(0.5% + 0.05Ω)	AC2,500V 1 minute

부하경감곡선



온도상승



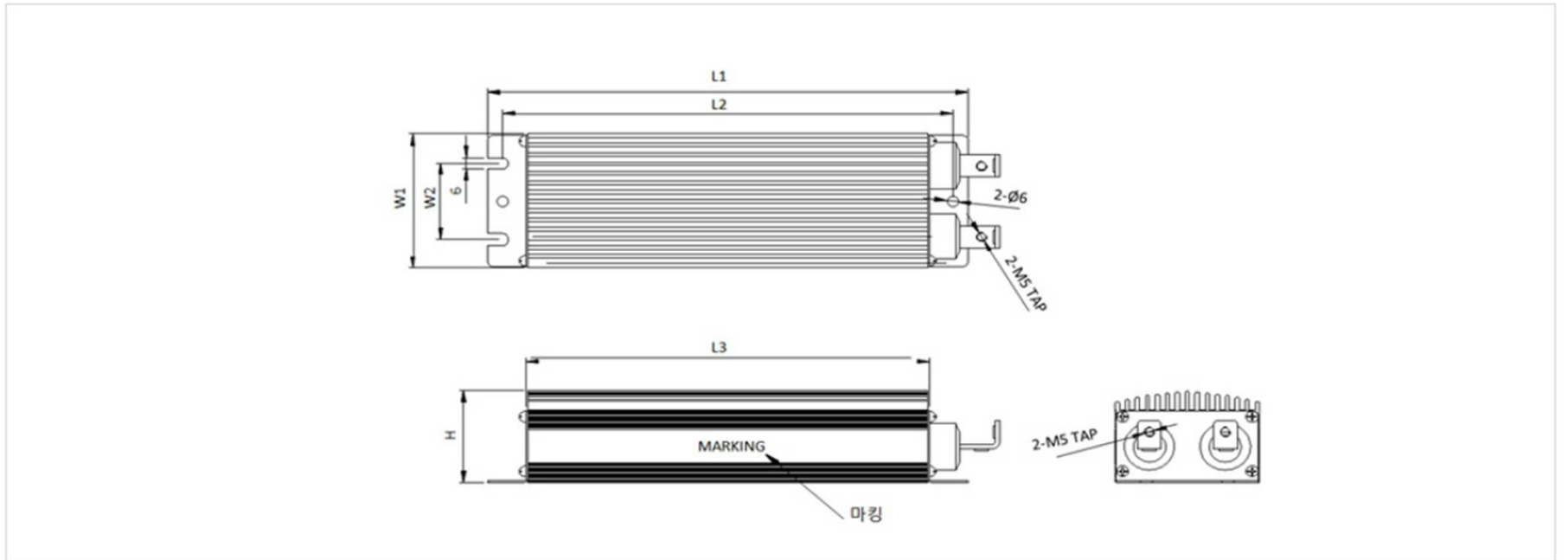
정격전력과 저항

Model	Rated Wattage	Resistance Value(Ω)		Tolerance
		W	N	
MCRF-300	300W	0.1~500	0.1~200	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRF-400	400W	0.1~600	0.1~300	
MCRF-500	500W	0.1~600	0.1~300	
MCRF-600	600W	0.1~800	0.1~350	
MCRF-800	800W	0.1~1.0k	0.1~500	
MCRF-1000	1.0kW	0.1~1.5k	0.1~700	
MCRF-1200	1.2kW	0.1~2.0k	0.1~1.0k	
MCRF-1500	1.5kW	0.1~5.0k	0.1~2.0k	
MCRF-2000	2.0kW	0.1~7.0k	0.1~3.0k	

주문방법

MCRF	300W	N	50Ω	J	T 145		
형명	전격 전력	권선형식		저항값	저항오차	온도 Sensor Type	
		N	무유도저항			T145	145°C
		-	일반			T200	200°C
						-	내장하지않음

외형도

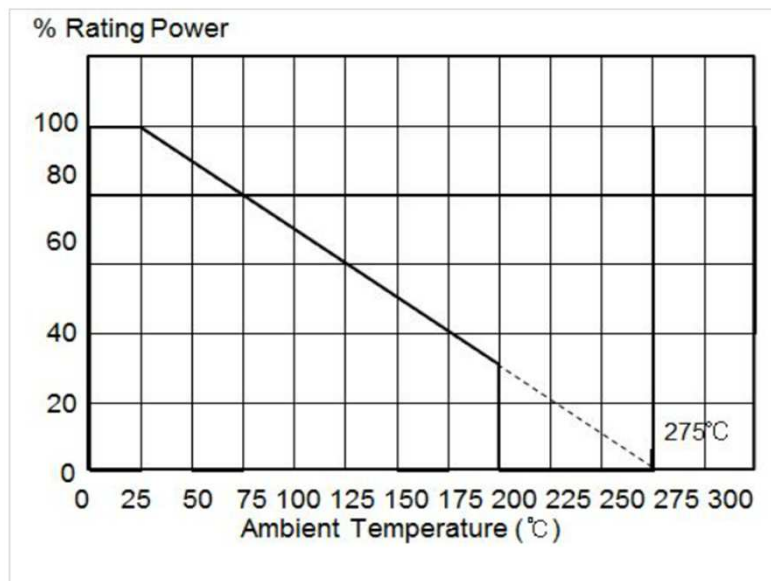


	L1±1mm	L2±1mm	L3±1mm	W1±0.5mm	W2±0.5mm	H±1mm	Weight(g) ±10%
MCRF-300	190	175	152	70	39	45	0.9
MCRF-400	200	205	182	70	39	45	1.1
MCRF-500	240	225	202	70	39	45	1.2
MCRF-600	260	245	222	70	39	45	1.3
MCRF-800	300	285	262	70	39	45	1.5
MCRF-1000	340	325	302	70	39	45	1.8
MCRF-1000	400	385	362	70	39	45	2.1
MCRF-1500	440	425	402	70	39	45	2.3
MCRF-2000	510	495	472	70	39	45	2.8

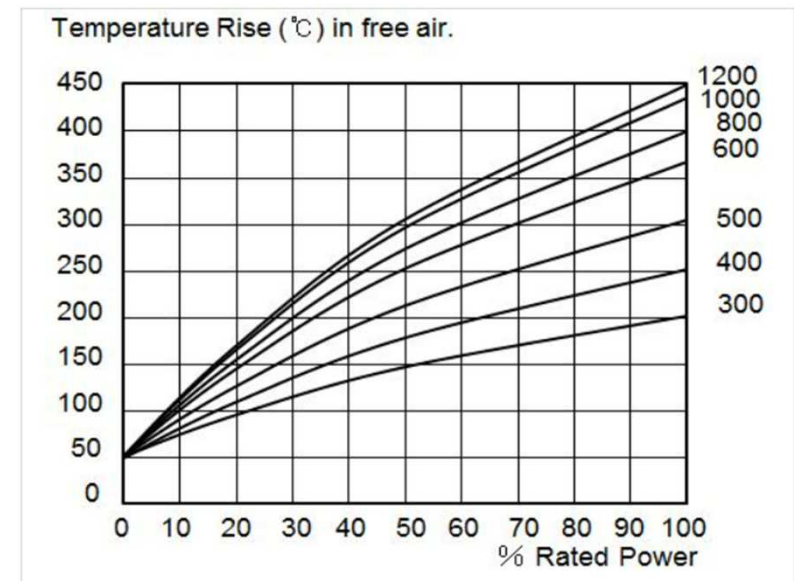
사양 및 성능

특성	규격	테스트 방법
정격저항 및 저항오차	허용오차 ± 1% (F) ± 5% (J) ± 10% (K)	
온도특성	±260ppm/°C max.	
정격부하	표면온도상승(temperature) 450°C max.	
단시간부하	아크, 소손 등의 이상이 없을 것.(0.5% + 0.05Ω)	
절연저항	200MΩ min.	DC1,000V
내전압	기계적 손상 및 절연파괴가 없을 것.(0.5% + 0.05Ω)	AC2,500V 1 minute

부하경감곡선



온도상승



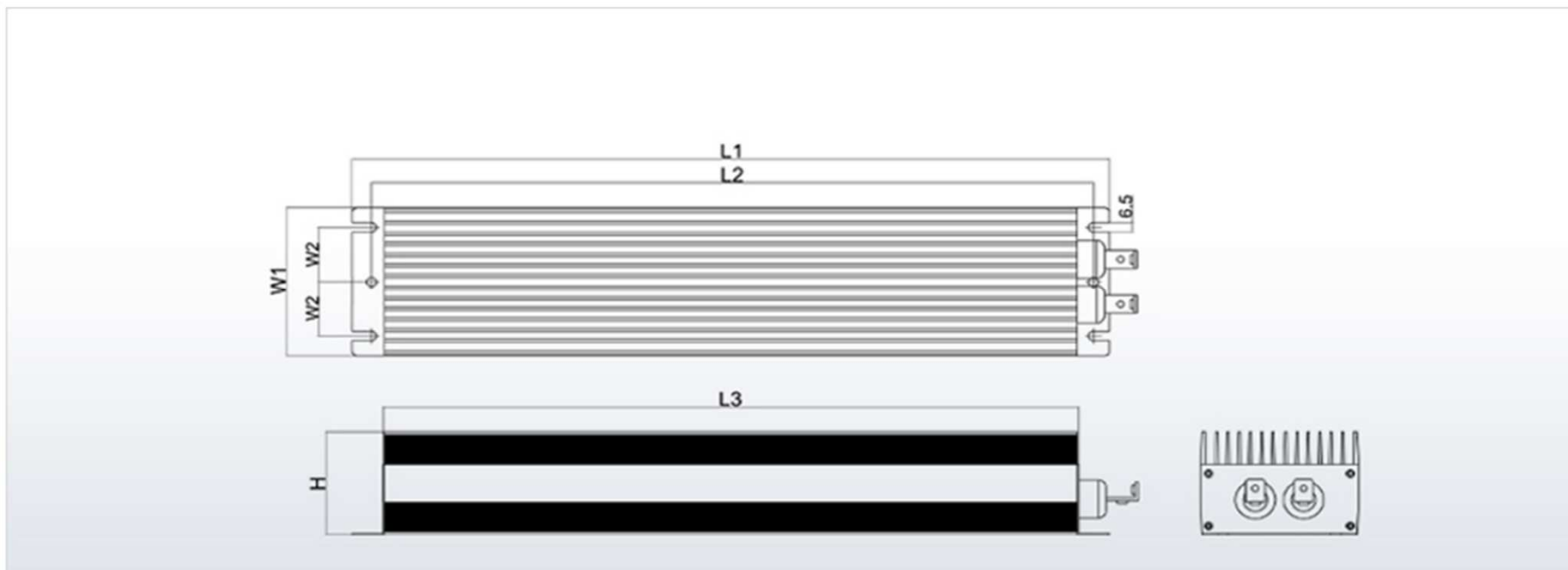
정격전력과 저항

Model	Rated Wattage	Resistance Value(Ω)		Tolerance
		W	N	
MCRJ-300	300W	0.1~500	0.1~200	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRJ-400	400W	0.1~600	0.1~300	
MCRJ-500	500W	0.1~600	0.1~300	
MCRJ-600	600W	0.1~800	0.1~350	
MCRJ-800	800W	0.1~1.0k	0.1~500	
MCRJ-1000	1.0kW	0.1~1.5k	0.1~700	
MCRJ-1200	1.2kW	0.1~2.0k	0.1~1.0k	
MCRJ-1500	1.5kW	0.1~5.0k	0.1~2.0k	
MCRJ-2000	2.0kW	0.1~7.0k	0.1~3.0k	

주문방법

MCRJ	300W	N	50Ω	J	T 145		
형명	전격 전력	권선형식		저항값	저항오차	온도 Sensor Type	
		N	무유도저항			T145	145°C
		-	일반			T200	200°C
						-	내장하지않음

외형치수



Model	L1±1mm	L2±1mm	L3±1mm	W1±1mm	W2±1mm	H±1mm
MCRS 2000 (2.0kW)	400	380	362	94	34	68
MCRS 2500 (2.5kW)	470	450	432	94	34	68
MCRS 3000 (3.0kW)	540	520	502	94	34	68

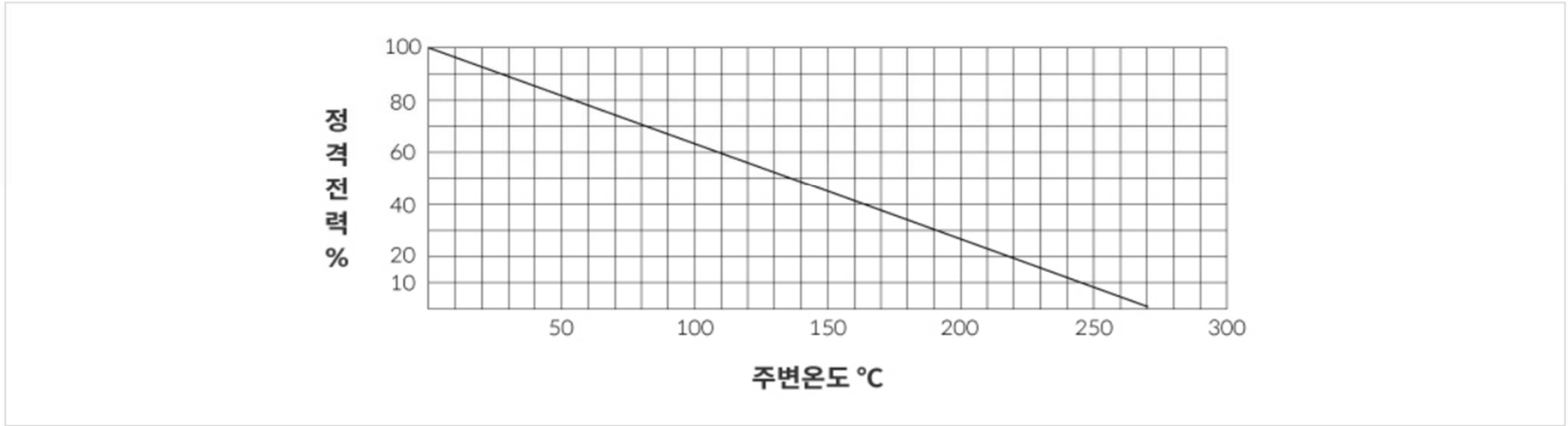
일반기격

모델명	정격 전력	저항값(Ω)		저항오차
		W	N	
MCRS-2000	2000W	0.1~5.0k	0.1~2.0k	F: $\pm 1\%$ J: $\pm 5\%$ K: $\pm 10\%$
MCRS-2500	2500W	0.1~7.0k	0.1~300	
MCRS-3000	3000W	0.1~9.0k	0.1~4.0k	

전기적 특성

항목	특성
사용온도	-55°C ~ 200°C
절연저항	100M Ω 이상
내전압	AC 2,500V / 1 Min
온도계수	± 260 ppm/ $^{\circ}$ C max

전력저감 곡선



주문방법

MCRF	3000W	N	100Ω	J	T 145														
형명	전격 전력	<table border="1"> <thead> <tr> <th colspan="2">권선형식</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>무유도저항</td> </tr> <tr> <td>-</td> <td>일반</td> </tr> </tbody> </table>	권선형식		N	무유도저항	-	일반	저항값	저항오차	<table border="1"> <thead> <tr> <th colspan="2">온도 Sensor Type</th> </tr> </thead> <tbody> <tr> <td>T145</td> <td>145°C</td> </tr> <tr> <td>T200</td> <td>200°C</td> </tr> <tr> <td>-</td> <td>내장하지않음</td> </tr> </tbody> </table>	온도 Sensor Type		T145	145°C	T200	200°C	-	내장하지않음
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