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DATA SHEET

Name of Product : METAL OXIDE FILM FIXED RESISTOR – TAPING

Sales Executive : _____

Date: _____

Prepared by	Inspected by	Audited by	Authorized by
customer approval	customer approval	customer approval	customer approval

Spec. No. MOFTB 2015

Rev. No.: 2015 May.(1)

PRODUCT : METAL OXIDE FILM FIXED RESISTOR	TYPE : MOF 125/25/50/100/200/300
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1. APPLICABLE SCOPE :

- 1.1 This specification is for use in METAL OXIDE FILM FIXED RESISTORS
- 1.2 Characteristics and specifications are according to those of :
JIS C 5202
- 1.3 RoHS and REACH compliant product

2. PART NUMBER

It is composed of description, rated wattage , nominal resistance value, tolerance and packaging.

2.1 Make Up :

M	O	F	1	0	0	4	7	0	R	J	T	B					
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Product Code		Power Rating		Nominal Resistance Value	Tolerance		Packaging		Lead Wire diameter		Taping width	
M	Metal	Code	Wattage		Code	Tol.		Taping	Code	Size	Code	Size
O	Oxide	125	0.125(1/8W)		G	2%	TB	in box		125: 0.40mm		52mm
F	Film	25	0.25(1/4W)		J	5%					043	125: 0.43mm
		50	0.50(1/2W)							25: 0.40mm	62	62mm
		100	1.0(1W)						048	25: 0.48mm	73	73mm
		200	2.0(2W)							50: 0.48mm		
		300	3.0(3W)						060	50: 0.60mm		
										100: 0.55mm		
									070	100: 0.70mm		
									200: 0.70mm			
									075	200: 0.75mm		
									300: 0.70mm			
									075	300: 0.75mm		

2.2 Explanation :

Part Number

Description

MOF 100 470R J TB

Metal Oxide Film Fixed Resistor , 1W, 470Ω , ±5%, tape in box ,

Lead Wire diameter: d=0.55mm, Taping width=52mm.

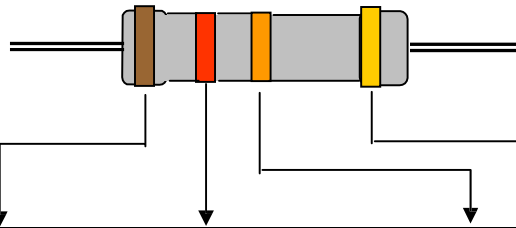
* Remarks : The power rating of 1/8 W is coded as 125

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2.3 Color code indication

Fixed resistors of which the nominal resistance value and tolerance are indicated by color codes as per Table 1 :

TABLE - 1



COLOR	1 ST DIGIT	2 ND DIGIT	MULTIPLIER	TOLERANCE
BLACK	0	0	1	
BROWN	1	1	10	
RED	2	2	100	G (±2%)
ORANGE	3	3	1,000	
YELLOW	4	4	10,000	
GREEN	5	5	100,000	
BLUE	6	6	1000,000	
VIOLET	7	7	10,000,000	
GREY	8	8		
WHITE	9	9		
GOLD			0.1	J (±5%)
SILVER			0.01	

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3. DIMENSIONS :

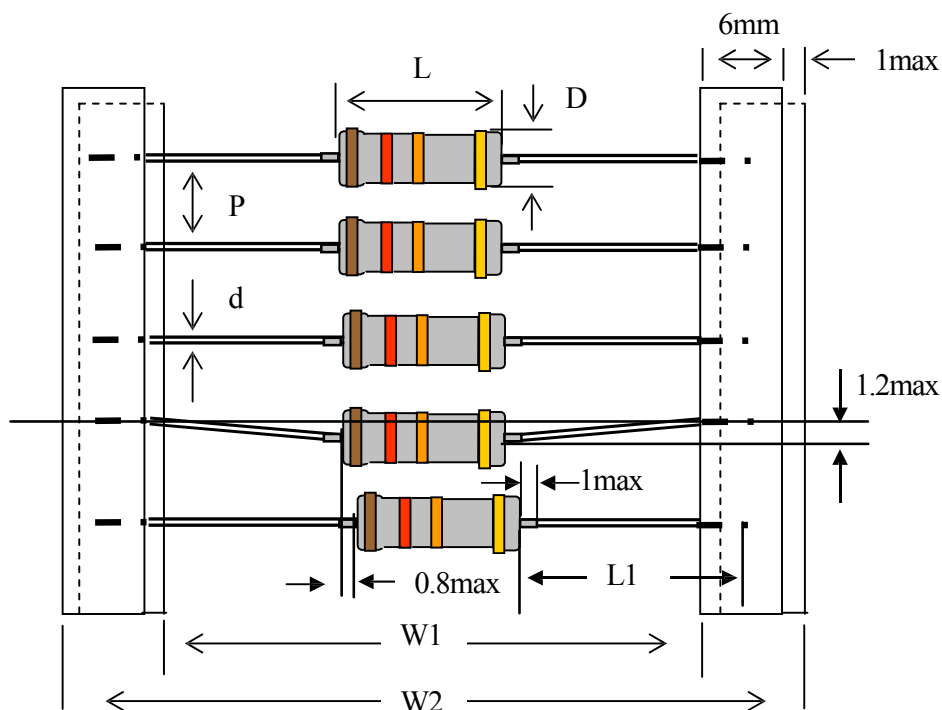


TABLE - 2

Unit : mm

TYPE	L	D	d	P	W1	W2	L1
MOF125	3.5±0.5	1.7±0.5	0.40 (0.43)±0.05	5±0.3	26±1	38±1	15±1
					52±1	64±1	27±1
MOF 25	6.0±1.0	2.3±0.5	0.40 (0.48)±0.05	5±0.3	26±1	38±1	14±1
					52±1	64±1	26±1
MOF 50	9.0±1.0	3.0±0.5	0.48 (0.60)±0.05	5±0.3	26±1	38±1	13±1
					52±1	64±1	26±1
MOF 100	11.0±1.5	4.5±0.5	0.55 (0.70)±0.05	5±0.3	52±1	64±1	25±1
					62±1.5	74±1.5	30±1
MOF 200	15.0±1.5	5.0±0.5	0.70(0.75)±0.05	10±0.3	52±1	64±1	23±1
					73±1.5	85±1.5	34±1
MOF 300	17.0 ± 1.5	6.0 ± 0.5	0.70(0.75)±0.05	10±0.3	73±1.5	85±1.5	33±1

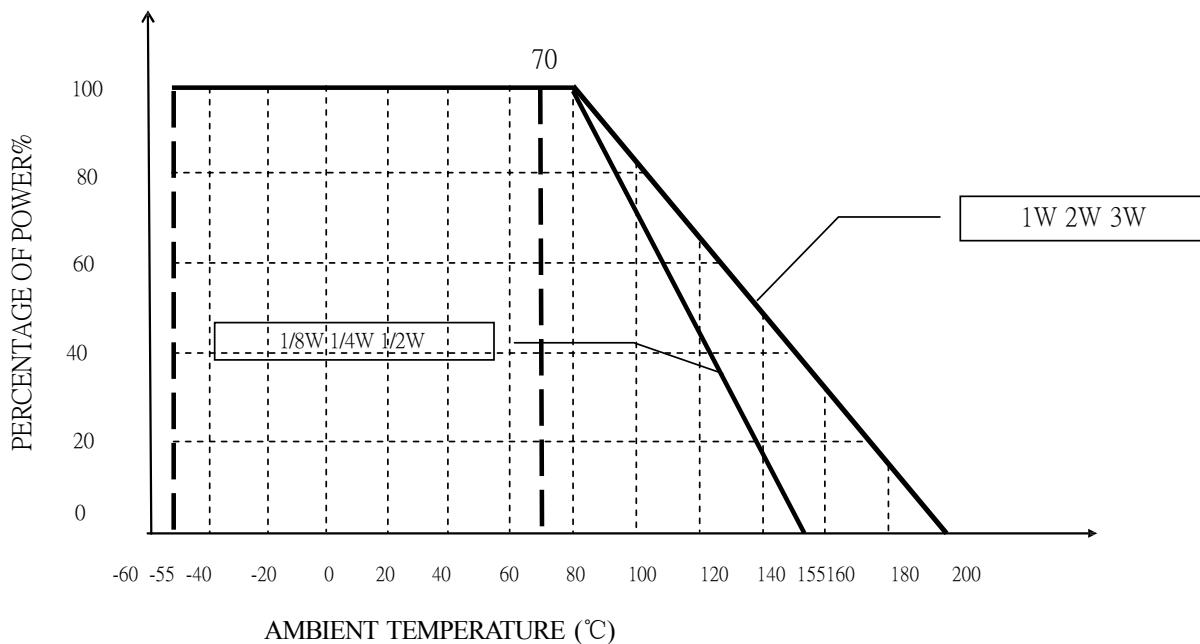
PRODUCT : METAL OXIDE FILM FIXED RESISTOR**TYPE : MOF 125/25/50/100/200/300****4. SPECIFICATIONS**

TABLE - 3

DESCRIPTION	MOF-125	MOF-25	MOF-50	MOF-100	MOF-200	MOF-300
STANDARD RESISTANCE VALUE RANGE	1Ω- 510KΩ	1Ω- 510KΩ	1Ω- 510KΩ	1Ω- 510KΩ	1Ω- 510KΩ	1Ω- 510KΩ
POWER RATING AT 70°C	1/8W	1/4W	1/2W	1W	2W	3W
*MAX WORKING VOLTAGE	200V	250V	250V	350V	350V	500V
*MAX OVERLOAD VOLTAGE	400V	600V	600V	600V	600V	800V
OPERATING TEMPERATURE RANGE	-40°C~+200°C	-40°C~+200°C	-40°C~+200°C	-40°C~+200°C	-40°C~+200°C	-40°C~+200°C
TEMPERATURE COEFFICIENT	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM	±350PPM
TEMPERATURE CYCLING	±(1%R+0.05Ω)	±(1%R+0.05Ω)	±(1%R+0.05Ω)	±(1%R+0.05Ω)	±(1%R+0.05Ω)	±(1%R+0.05Ω)
INSULATION RESISTANCE	MIN.1,000MΩ	MIN.1,000MΩ	MIN.1,000MΩ	MIN.1,000MΩ	MIN.1,000MΩ	MIN.1,000MΩ
HUMIDITY	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)
SHORT-TIME OVERLOAD	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)	±(2.5%R+0.05Ω)
SOLDERABILITY	MIN. 80% COVERED	MIN. 80% COVERED	MIN. 80% COVERED	MIN. 80% COVERED	MIN. 80% COVERED	MIN. 80% COVERED
VIBRATION	±(1.5%R+0.05Ω)	±(1.5%R+0.05Ω)	±(1.5%R+0.05Ω)	±(1.5%R+0.05Ω)	±(1.5%R+0.05Ω)	±(1.5%R+0.05Ω)
LOAD LIFE	±(5%R+0.15Ω)	±(5%R+0.15Ω)	±(5%R+0.15Ω)	±(5%R+0.15Ω)	±(5%R+0.15Ω)	±(5%R+0.15Ω)

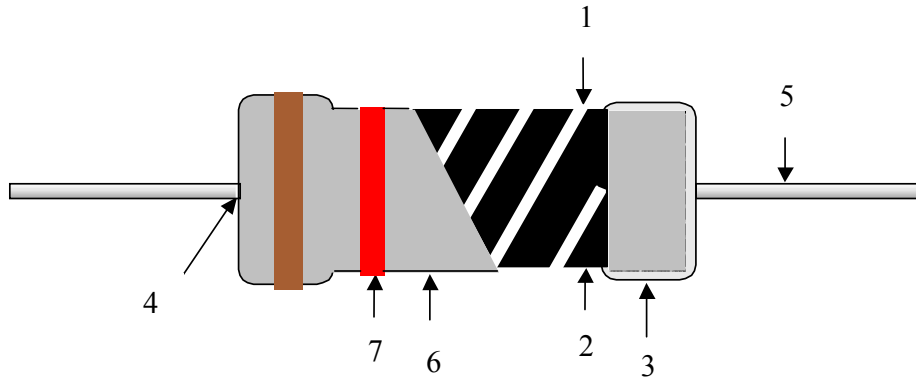
* The working voltage is calculated based on the resistance value following the formula of $V=\sqrt{P \cdot R}$ or to its maximum extent as indicated above

* The overload voltage is calculated based on the resistance value following the formula of $V= 2.5 \cdot \sqrt{P \cdot R}$ or to its maximum extent as indicated above

5. POWER DERATING CURVES

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6. STRUCTURAL DIAGRAM



(1)	CORE	CERAMIC ROD
(2)	RESISTANCE FILM	METAL OXIDE FILM
(3)	TERMINAL	TINNED IRON CAP
(4)	CONNECTION	ELECTRIC WELDING
(5)	LEAD WIRE	SOLDERED OR TINNED ANNEALED COPPER WIRE
(6)	FINISHING PAINTING	FLAMEPROOF SILICON PAINT
(7)	INDICATION	COLOR CODE INK

TABLE - 4

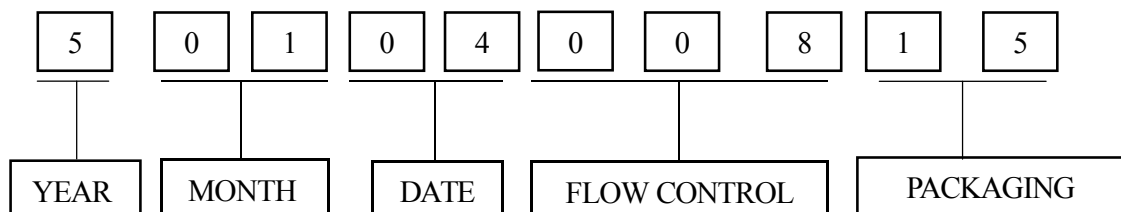
RATED RESISTANCE VALUE	MAX. TESTING VOLTAGE	
	0.125W / 0.25W	0.5W / 1W / 2W / 3W
$0.1\Omega \leq R < 10\Omega$	0.3	0.3
$10\Omega \leq R < 100\Omega$	0.3	1
$100\Omega \leq R < 1K\Omega$	1	3
$1K\Omega \leq R < 10K\Omega$	3	10
$10K\Omega \leq R < 100K\Omega$	10	30
$100K\Omega \leq R < 1M\Omega$	30	50
$1M\Omega \leq R$	50	100

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TABLE – 5

DC RESISTANCE VALUE	TEST METHOD MIL-STD-202 ITEM 303	VOLTAGE AS TABLE -4. TEMPERATURE 25 ±2°C. AQL 0.25%.
VOLTAGE WITHSTAND	TEST METHOD MIL-STD-202 ITEM 301	V-BLOCK METHOD. VOLTAGE AS TABLE -3 ×1.42, 1 MIN. AQL 1%.
SHORT TIME OVERLOAD	TEST METHOD JIS C 5202 ITEM 5.5	RATED VOLTAGE × 2.5 TIMES OR MAX.WORKINGVOLTAGE × 2 TIMES. ABOVE TEST 5 SEC. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(2.5%R+0.05 Ω).
INTERMITTENT OVERLOAD	TEST METHOD JIS C 5202 ITEM 5.8	RATED VOLTAGE×4 TIMES, (1 SEC ON, 25 SEC OFF). ABOVE TEST 10,000 CYCLES. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(1%R+0.05 Ω).
TERMINAL STRENGTH	TEST METHOD MIL-STD-202 ITEM 211	TENSILE STRENGTH : 1KG TENSIONAL STRENGTH : 180°, 2 CYCLES. BENDING STRENGTH : 0.5KG 2 TIMES. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(0.5%R+0.05 Ω).
SOLDERABILITY OF TERMINAL	TEST METHOD MIL-STD-202 ITEM 210	260±5°C 10±1SEC. AFTER TESTING LEAVE FOR 3 HOURS. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(1%R+0.05 Ω).
TEMPERATURE CYCLE	TEST METHOD MIL-STD-202 ITEM 107	LOW SIDE TEMPERATURE : -55°C±3°C 30MIN. ROOM TEMPERATURE : 10-15MIN. HIGH SIDE TEMPERATURE : +125°C±3°C 30MIN. ROOM TEMPERATURE : 10-15MIN. ABOVE TEST 5 CYCLES AFTER LAST CYCLE, LEAVE FOR 1-3 HOURS. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(1%R+0.05 Ω).
VIBRATION WITHSTAND	TEST METHOD MIL-STD-202 ITEM 204	X, Y, Z-EACH DIRECTION 2 HOURS. AMPLITUDE 0.75MM. RANGE : 10HZ ~ 500HZ. THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(1.5%R+0.05 Ω).
LOAD LIFE	TEST METHOD MIL-STD-202 ITEM 108	70±2°C. 1000 HOURS RATED VOLTAGE (1.5 HOURS ON, 0.5 HOUR OFF). THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(5%R+0.15 Ω).
RESISTANCE TEMPERATURE COEFFICIENT	TEST METHOD MIL-STD-202 ITEM 304	THE RESISTANCE VALUE CHANGE RATE SHALL BE AS TABLE – 3.
LOAD LIFE IN HUMIDITY	TEST METHOD MIL-STD-202 ITEM 103	THE RESISTANCE VALUE CHANGE RATE SHALL BE WITHIN ±(2.5%R+0.05 Ω).

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8. LOT NO. (Coding System)

9. PACKING DATA

TYPE	PER BOX	PER CARTON	INNER BOX			EXPORT CARTON		
			L	W	H	L	W	H
MOF125	5,000PCS	50,000PCS	255mm	81mm	72mm	419mm	264mm	170mm
MOF25	5,000PCS	50,000PCS	260mm	75mm	105mm	410mm	270mm	238mm
MOF50	2,000PCS	20,000PCS	258mm	78mm	80mm	423mm	270mm	355mm
MOF100	1,000PCS	10,000PCS	255mm	81mm	72mm	419mm	264mm	170mm
MOF200	1,000PCS	10,000PCS	260mm	78mm	87mm	422mm	270mm	200mm
MOF300	500PCS	5,000PCS	255mm	100mm	90mm	515mm	267mm	203mm

