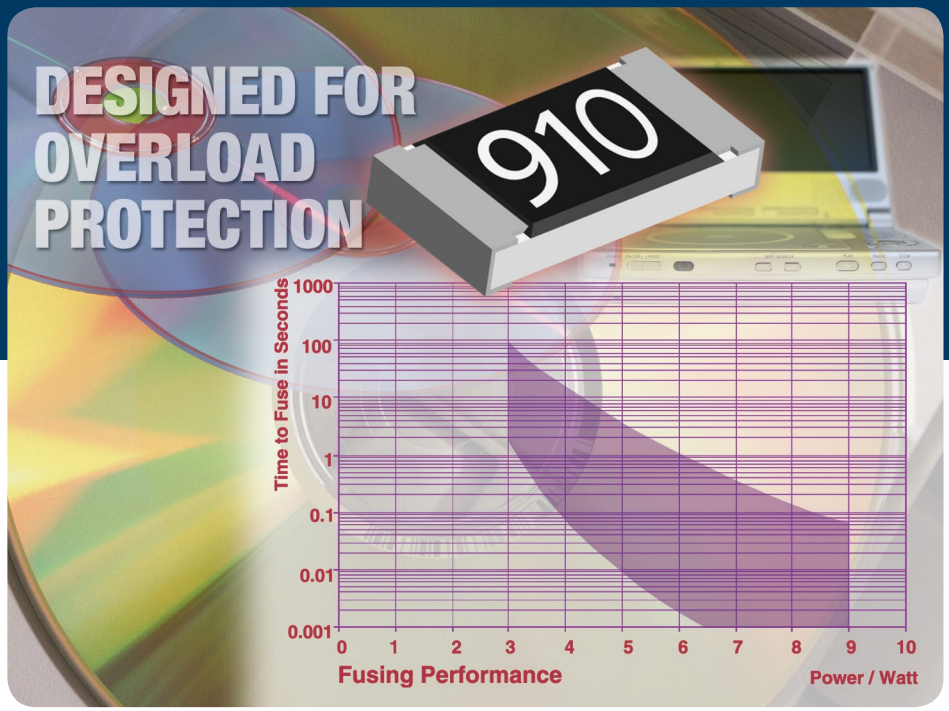
THIN FILM RESISTOR

M25SI



Thin Film, Rectangular, Fusible Chip Resistor

KEY BENEFITS

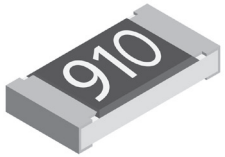
- Designed for overload protection at constant voltage
- Medium- to fast-reacting fuse
- Good pulse handling
- Special protective top coat
- Flame retardant
- Suitable for automatic high speed insertion
- Fusing characteristic is defined more exactly than in thick film technology
- More cost-effective than a combination of glass fuse and resistor

APPLICATIONS

- Battery chargers
- Cordless phones
- DVD players
- Power supplies
- Circuit function testing

Datasheet is available on our web site at www.vishay.com
for M25SI - http://www.vishay.com/doc?20031

Thin Film, Rectangular, Fusible, Resistor Chips



FEATURES

- Metal film on high quality ceramic
- Special protective top coat
- Flame retardant
- Sn solder contacts on Ni barrier layer
- Fusible resistor for constant voltage
- Automatic placement compatibility

STANDARD ELECTRICAL SPECIFICATIONS

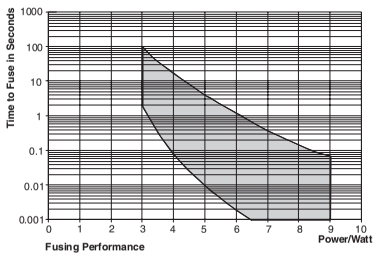
MODEL	SIZE		POWER RATING $W_{70°C}$	LIMITING ELEMENT VOLTAGE $V_{\equiv}$ MAX	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
	INCH	METRIC						
M25SI	1206	3216	0.25	$\sqrt{P \times R}$	100	5	1R – 3K9	24

- Power rating depends on the max. temperature at the solder point, the component placement density and the substrate material.
- Marking: 3 digits.
- Ask about extended value ranges.
- TC 50ppm/°C, Tolerance 1% on special request.
- Top coat: beige, transparent.

TECHNICAL SPECIFICATIONS

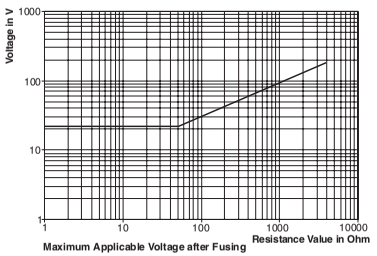
PARAMETER	UNIT	M25SI
Rated Dissipation at 70°C	W	0.25
Insulation Voltage (1 min)	$V_{dc/ac\ peak}$	> 300
Thermal Resistance [1]	K/W	≤ 220[1]
Insulation Resistance	Ω	> 10^9
Category Temperature Range	°C	- 55 / + 125
Failure Rate	h^{-1}	1 •10^{-9}
Weight / 1000pcs	g	10

[1] Measuring conditions in acc. with CECC 40401



PULSE TEST DATA

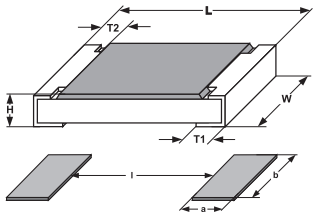
Pulse Power (Square Pulse)	0.9W	0.3W
Pulse Duration t_i	100µs	100ms
Pulse Pause t_p	100ms	1s
Number of pulses	10^5	10^5
Drift after pulse test	< 0.1%	< 0.1%



ORDERING INFORMATION

M25SI	100	91R	5%	P5
MODEL	TC ppm/K	RESISTANCE VALUE Ω	TOLERANCE ± %	PACKAGING P5-Papertape 5000 pcs

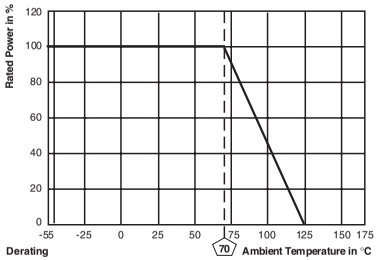
DIMENSIONS

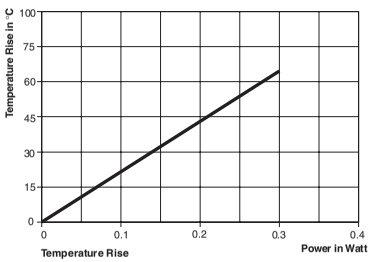


SIZE		DIMENSIONS [in millimeters]				
INCH	METRIC	L	W	H	T1	T2
1206	3216	3.2 $^{+0.10}_{-0.20}$	1.6 ± 0.15	0.55 ± 0.05	0.45 ± 0.2	0.4 ± 0.2

SIZE		SOLDER PAD DIMENSIONS in millimeters*					
INCH	METRIC	a	b	l	a	b	l
1206	3216	0.9	1.7	2.0	1.1	1.7	2.3

*Pads: recommendations only





PERFORMANCE

TEST	CONDITIONS OF TEST	REQUIREMENTS[1]
Endurance Test at 70°C IEC 60115-1 4.25.1	1000 hours at 70°C 1.5 hours "ON", 0.5 hours "OFF"	≤ ± 1%
Endurance at UCT IEC 60115-1 4.25.3	1000 hours at 125 °C without load	≤ ± 1%
Thermal Shock IEC 60115-1 4.19, IEC 60068-2-14	Rapid change between upper and lower category temperature	≤ ± 0.2%
Damp Heat Steady State IEC 60115-1 4.24, IEC 60068-2-3	56 days at 40°C and 93% relative humidity	≤ ± 0.5%
Resistance to Soldering Heat IEC 60115-1 4.18, IEC 60068-2-20	10 seconds at 260°C solder bath temperature	≤ ± 0.2%

[1] Limits for change of resistance at test

APPLICABLE SPECIFICATIONS

- CECC40000 / 40400
- EN140400 / IEC 60115 – 1

Revision 24-May-05