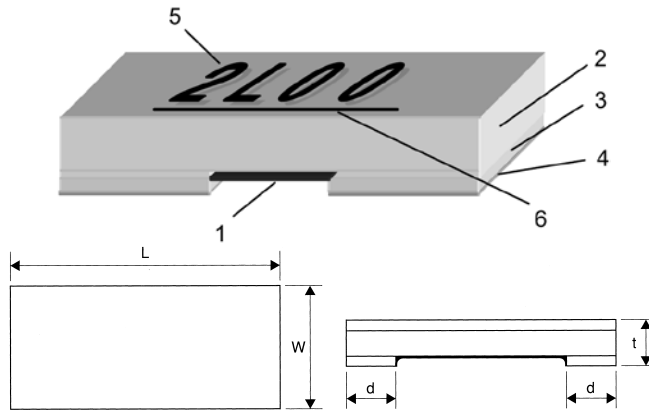


**METAL PLATE
CURRENT SENSING
MILLIOHM CHIP
TLR**

NEW



STRUCTURE

- 1 Heat resistant protective coating
- 2 Resistive element: Metal alloy
- 3 Termination: Cu metal
- 4 Solder
- 5 Marking
- 6 Underline

IDENTIFICATION

PRODUCT CODE	COATING COLOR	MARKING
TLR (TCR 75)	No coating	Black, 4 digits and underline

All these products have Pb-free terminations and meet RoHS requirements

TYPE DESIGNATION (HOW TO ORDER)

TLR	3AW	D	TE	5L00	F	75
PRODUCT CODE	POWER RATING 2B: 0.5W 2H: 1W 3AW: 2W	TERMINAL MATERIAL D: SnAgCu	TAPING* TD: punch paper tape (only 2B) TE: embossed plastic tape BK: Bulk *Please see "PACKAGING"	NOMINAL RESISTANCE F: 4 digits	RESISTANCE TOLERANCE F: ± 1%	T.C.R. (ppm/K) 75: ±75 "Blank": ±150, ±200

FEATURES

- Ultra low resistances (1 mΩ ~)
- High reliability and performance with resistance tolerance ±1% and T.C.R. ±75ppm/K
- Suitable for large current detecting
- Ultra low height with a thickness of 0.6 mm
- Suitable for use in small equipment
- Non-inductive type
- Excellent high frequency characteristics
- Automatic mounting machine is applicable
- Ideal for use in DC-DC converter, as current detection for CPU's, in motor control units and in inverter power supplies
- Meets or exceeds IEC 60115-1, JIS C 5201-1
- Suitable for reflow soldering
- Rated ambient temperature: +70°C
- Operating temperature range: -65°C ... +170°C (+155°C)

DIMENSIONS (mm)

TYPE	RESISTANCE (Ω)	L	W	d	t
TLR 2B	2 mΩ ... 20 mΩ	3.2 ± 0.2	1.6 ± 0.2	0.5 ± 0.2	0.6 ± 0.2
	1 mΩ			1.8 ± 0.2	0.65 ± 0.2
TLR 2H	2 mΩ ... 6 mΩ	5.0 ± 0.2	2.5 ± 0.2	1.5 ± 0.2	0.6 ± 0.2
	7 mΩ ... 10 mΩ			0.5 ± 0.2	
TLR 3AW	2 mΩ	6.35 ± 0.25	3.18 ± 0.25	2.5 ± 0.25	0.6 ± 0.25
	3 mΩ ... 4 mΩ			2.2 ± 0.25	
	5 mΩ ... 8 mΩ			1.2 ± 0.25	

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

RATING

SIZE	TYPE	T.C.R. (ppm/K)	POWER RATING*	RESISTANCE RANGE (Ω)	RESISTANCE TOLERANCE	OPERATING TEMP. RANGE
1206	TLR 2B	± 75 (±50 and ±150)** on request	0.5W	2m, 3m, 4m, 5m, 6m, 8m, 10m, 11m, 12m, 13m, 15m, 16m, 18m, 20m	F (±1%)	-65°C... +155°C
2010	TLR 2H		1.0W	1m, 2m, 3m, 4m, 5m, 6m, 7m, 8m, 9m, 10m		
2512	TLR 3AW		2.0W	2m, 3m, 4m, 5m, 6m, 7m, 8m		

* For resistors operated at an ambient temperature over +70°C or above, the power rating shall be derated in accordance with the above derating curve.

** If T.C.R. ±50ppm/K or ±150ppm/K are required, please order detailed specifications from KOA Europe.

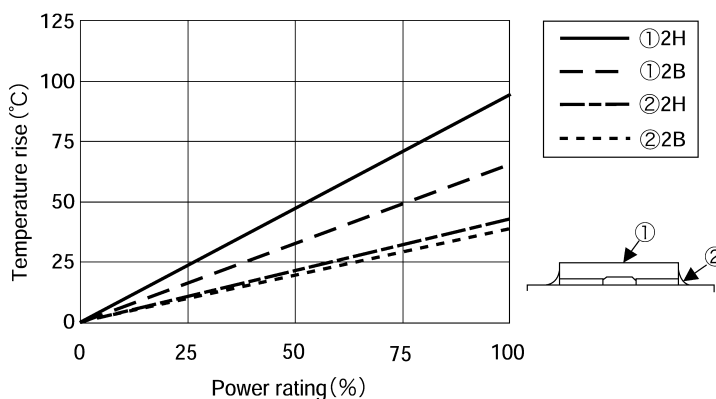
Also available on request is TLR3A (2512, 1W, 1mΩ...4mΩ, TCR±150ppm/K) with an Operating Temperature Range: -65°C...+170°C.

Precautions: Please note that the resistance value might change after soldering depending on the shape and the size of the pad pattern or the solder amount. Please order technical specification for this product before you order and use this series.

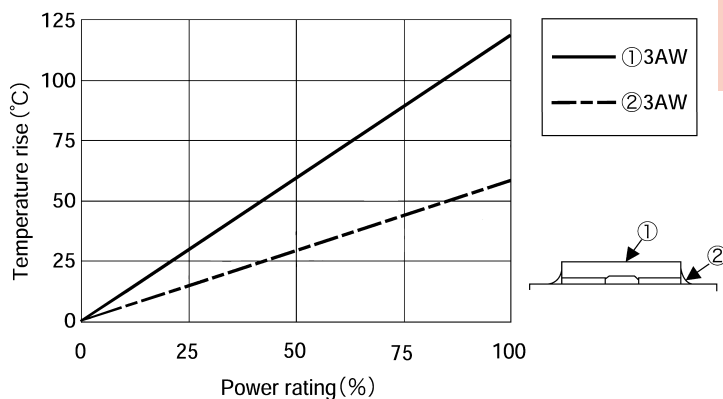
Rated voltage = √ Power rating x resistance value or max. working voltage, whichever is lower.

METAL PLATE CURRENT SENSING MILLIOHM CHIP TLR

TEMPERATURE RISE TLR2B/2H 8mΩ

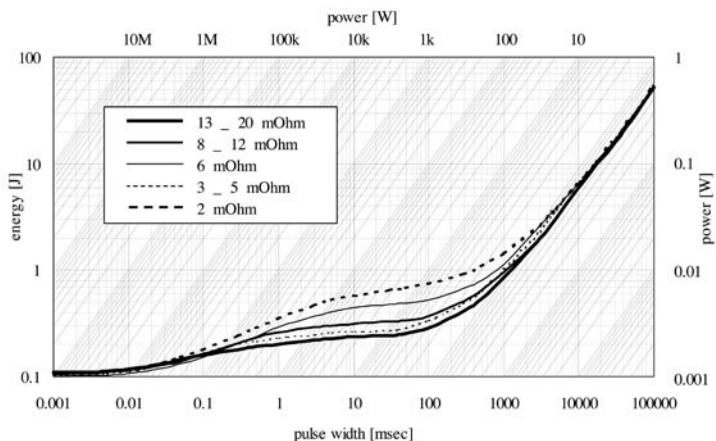


TLR3AW 4mΩ

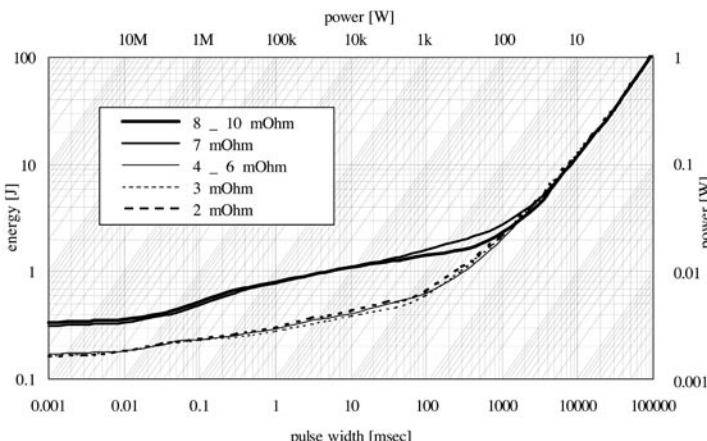


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

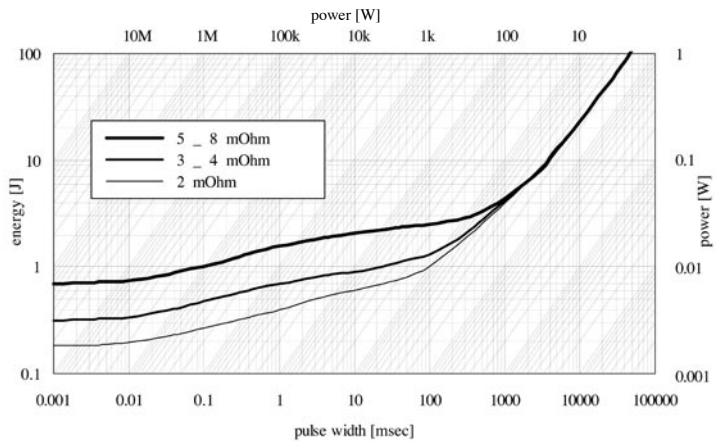
ONE PULSE LIMIT TLR2B 75ppm



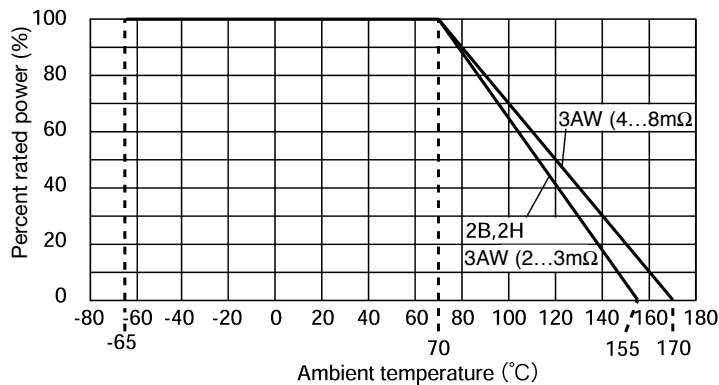
ONE PULSE LIMIT TLR2H 75ppm



ONE PULSE LIMIT TLR3AW 75ppm



DERATING CURVE



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LOW OHM