



KEY FEATURES:

- Power rating up to 10W in 2512, 3920 and 5930 Sizes
- Continuous current up to 129A
- Heavy copper terminals
- Excellent long term stability
- Resistance range from 0.2mΩ to 5mΩ
- RoHS complaint under Directive 2011/65/EU.



APPLICATIONS:

- Current sensor for power modules
- Frequency convertors
- High current handling for automobile engine controls and power management applications

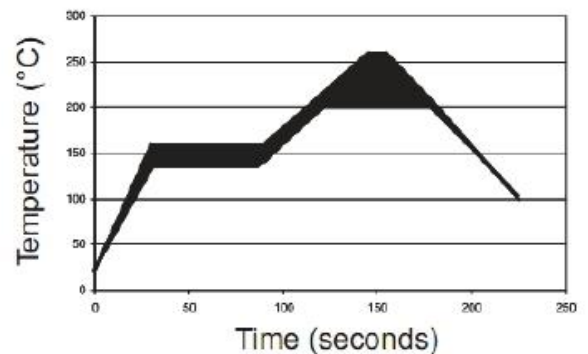
TECHNICAL DATA:

Power rating P ₇₀ °C	Watts	Up to 10W in 5930 size
Resistance value	mOhm	0.2mΩ to 5mΩ
Tolerance	%	1%, 2% and 5%
Temperature Coefficient (20-60 °C)	ppm/K	From 50
Inductance	nH	< 3
Stability (at rated power) deviation after 1000 Hours (T _k <100 °C)	%	+/- 1%

RECOMMENDED SOLDER PROFILE:

IR Reflow Peak: 260°C max for 10 seconds

- Not suitable for wave soldering
- Compatible with lead and lead-free solder reflow processes
- Recommended IR reflow profile:





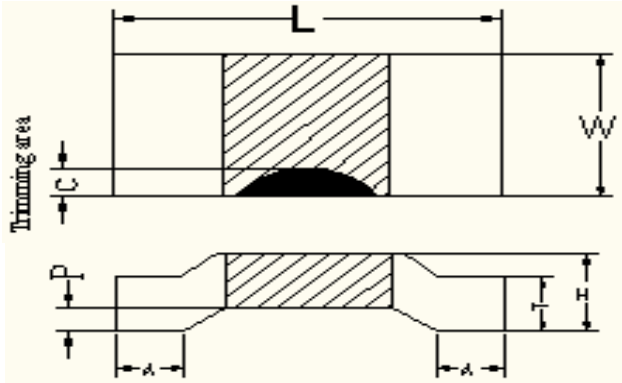
ELECTRICAL SPECIFICATIONS:

Parameter	Test Conditions	Specified Values
Temperature Cycling	5 cycles -55 °C to +125 °C as per JIS C5202-7.4	± (1% +0.0005Ω)
Moisture Resistance	MIL-STD-202, Method 106	± (1% +0.0005Ω)
Load Life	1000 hours as per JIS-C5202-7.10	± (1% +0.0005Ω)
High Temperature Exposure	As per JIS-C5202-7.2 at 125°C for 1000 hours	± (1% +0.0005Ω)
Short Term Overload	5X rated power for 5 Seconds	± (1% +0.0005Ω)

Sizes and Value Range				
Type / Code	Ohm Range Ω / mΩ and Tolerance 1%, 2% and 5%		Power Rating	TCR (ppm/°C)
2512	0.0003	0.3	3W	±150 ppm/°C
	0.0005	0.5		±115 ppm/°C
	0.00075	0.75		±115 ppm/°C
	0.001	1		±100 ppm/°C
	0.002	2		±50 ppm/°C
	0.003	3	2W	±50 ppm/°C
	0.004	4	1.5W	±50 ppm/°C
0.005	5			
3920	0.0002	0.2	5W	±200 ppm/°C
	0.0003	0.3		±150 ppm/°C
	0.0005	0.5		±70 ppm/°C
	0.001	1		±50 ppm/°C
	0.002	2	4W	±50 ppm/°C
	0.003	3	3W	
	0.004	4	2.5W	
0.005	5	2W		
5930	0.0002	0.2	10W	±100 ppm/°C
	0.0003	0.3	7W	
	0.0005	0.5	6W	±75 ppm/°C
	0.001	1		±50 ppm/°C
	0.002	2	4W	

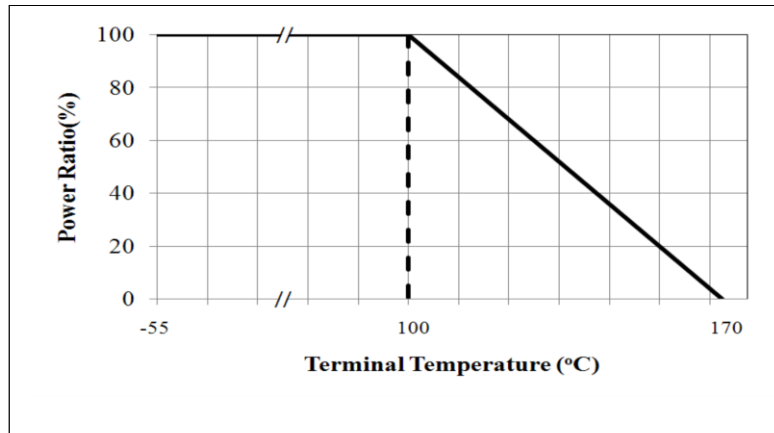


DIMENSIONS:



Type	L	W	H	T	A	C(max)	P	Unit
EBW 2512	0.254±0.008	0.128±0.008	0.046 - 0.026	0.032-0.012	0.035±0.008	0.016	0.014±.004	Inches
	6.5±0.20	3.25±0.20	1.17 - 0.66	0.82 - 0.31	0.90±0.20	0.4	0.35±0.1	mm
EBW 3920	0.402±0.008	0.205±0.008	0.078 - 0.033	0.058 - 0.014	0.071±0.012	0.024	0.02±0.004	Inches
	10.20±0.20	5.20±0.20	1.98 - 0.85	1.48 - 0.35	1.80±0.30	0.6	0.5±0.10	mm
EBW 5930	0.591±0.008	0.305±0.008	0.076 - 0.037	0.056 - 0.018	0.165±0.008	0.039	0.02±0.004	Inches
	15.00±0.20	7.75±0.20	1.92 - 0.96	1.42 - 0.46	4.2±0.20	1	0.50±0.10	mm

DERATING CURVE:



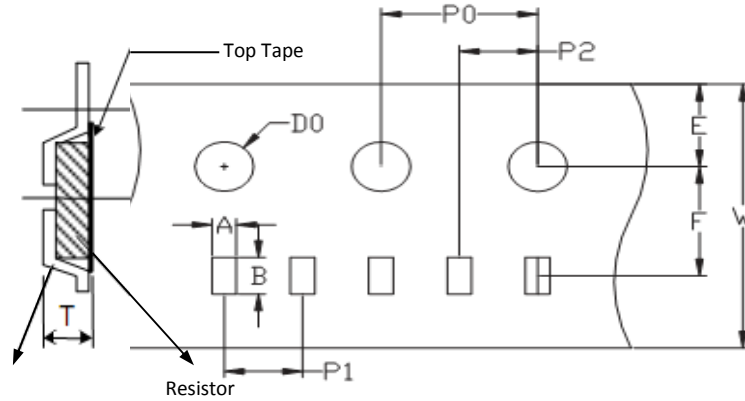
PART NUMBER SYSTEM:

EBW 2512 0L30 F E R
 (1) (2) (3) (4) (5) (6)

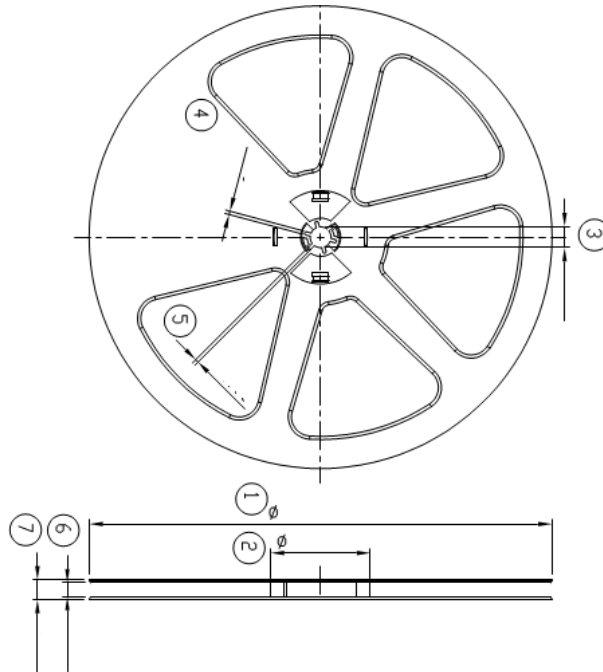
- (1) = Series Name
- (2) = Chip Size
- (3) = Resistance Value Code L= mOhms mark, 0L30 = 0.3mOhms, 1L00 = 1.0 mOhms
- (4) = Resistance Tolerance, F, G, J etc
- (5) = Packaging Material, E – Emboss
- (6) = R = RoHS Compliant



TAPE AND REEL INFORMATION:



Carrier Tape Specification						
Type / Code	A	B	E	F	W	Unit
2512	0.140 ± 0.004	0.266 ± 0.004	0.069 ± 0.004	0.217 ± 0.002	0.472 ± 0.008	inches
	3.55 ± 0.10	6.75 ± 0.10	1.75 ± 0.10	5.50 ± 0.05	12.00 ± 0.20	mm
3920	0.217 ± 0.004	0.425 ± 0.004	0.069 ± 0.004	0.295 ± 0.002	0.630 ± 0.008	inches
	5.50 ± 0.10	10.80 ± 0.10	1.75 ± 0.10	7.50 ± 0.05	16.00 ± 0.20	mm
5930 (all Ω ranges)	0.327 ± 0.004	0.606 ± 0.004	0.069 ± 0.004	0.453 ± 0.004	0.945 ± 0.012	inches
	8.30 ± 0.10	15.40 ± 0.10	1.75 ± 0.10	11.50 ± 0.10	24.00 ± 0.30	mm
Type / Code	P0	P1	P2	D0	T	Unit
2512 0.3mΩ, 0.5m, 2.0mΩ	0.157 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.059 ± 0.004	0.055 ± 0.004	inches
	4.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.40 ± 0.10	mm
2512 1.0mΩ, 3.0mΩ	0.157 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.059 ± 0.004	0.043 ± 0.004	inches
	4.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.10 ± 0.10	mm
2512 4.0mΩ, 5.0mΩ	0.157 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.059 ± 0.004	0.031 ± 0.004	inches
	4.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	0.8 ± 0.10	mm
3920 <u>0.2, 0.3, 0.5, 2.0mΩ,</u>	0.157 ± 0.002	0.315 ± 0.004	0.079 ± 0.004	0.059 ± 0.004	0.078 ± 0.004	inches
	4.00 ± 0.05	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.97 ± 0.10	mm
3920 <u>1.0, 3.0, 4.0, 5.0mΩ</u>	0.157 ± 0.002	0.315 ± 0.004	0.079 ± 0.004	0.059 ± 0.004	0.049 ± 0.004	inches
	4.00 ± 0.05	8.00 ± 0.10	2.00 ± 0.05	1.50 ± 0.10	1.25 ± 0.10	mm
5930 0.2mΩ, 0.3mΩ, 1.0mΩ	0.157 ± 0.004	0.472 ± 0.004	0.079 ± 0.004	0.059 ± 0.004	0.091 ± 0.004	inches
	4.00 ± 0.10	12.00 ± 0.10	2.00 ± 0.10	1.50 ± 0.10	2.30 ± 0.10	mm
5930 0.5mΩ, 2.0mΩ	0.157 ± 0.004	0.472 ± 0.004	0.079 ± 0.004	0.059 ± 0.004	0.055 ± 0.004	inches
	4.00 ± 0.10	12.00 ± 0.10	2.00 ± 0.10	1.50 ± 0.10	1.40 ± 0.10	mm



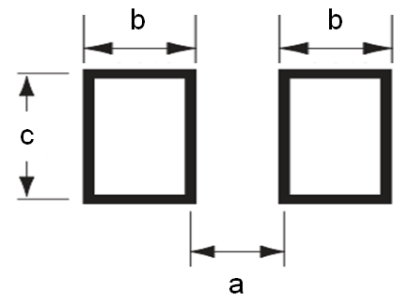
REEL SPECIFICATIONS:

unit: mm

Chip Size	Reel Width	①	②	③	④	⑤	⑥	⑦
2512	10"	$\psi 250 \pm 1$	$\psi 62 \pm 0.5$	13 ± 0.5	2 ± 0.5	2 ± 0.5	12.5 ± 0.1	16.5 ± 0.1
3920	13"	$\psi 330 \pm 1$	$\psi 99 \pm 0.5$	13.5 ± 0.5	2.3 ± 0.5	2.5 ± 0.5	20.7 ± 0.1	16.7 ± 0.1
5930	13"	$\psi 330 \pm 1$	$\psi 99 \pm 0.5$	13.5 ± 0.5	2.5 ± 0.5	2.5 ± 0.5	25.4 ± 0.1	29.4 ± 0.1

RECOMMENDED PAD LAYOUT

Recommended PAD Layout				
Type / Code	a	b	c	Unit
2512	0.15	0.071	0.134	inches
	3.8	1.8	3.4	mm
3920	0.22	0.106	0.244	inches
	5.6	2.7	6.2	mm
5930	0.22	0.205	0.344	inches
	5.6	5.2	8.75	mm





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