



FEATURES:

- TCR as low as $\pm 50\text{ppm}$
- High Current capabilities up to 44.7A
- Resistance Range: $0.5\text{m}\Omega$ to $10\text{m}\Omega$
- Operating Temperature Range: -55°C to 170°C



PART NUMBER STRUCTURE

ULCR	2512	-	M500	J	T
Series	Size		Resistance	Tolerance	Packaging
	2512		4 DIGIT e.g. M500 = $0.5\text{m}\Omega$ 3M00 = $3\text{m}\Omega$ 6M50 = $6.5\text{m}\Omega$	F = $\pm 1\%$ J = $\pm 5\%$	T = Tape & Reel
Example P/N: ULCR2512-M500JT					
Standard Termination is 100% matte Tin over Nickel.					

DIMENSIONS

Unit: inches (mm)

SIZE	L	W	T	C
2512	0.248 ± 0.006 (6.3 \pm 0.15)	0.126 ± 0.006 (3.2 \pm 0.15)	See chart below	0.052 ± 0.015 (1.30 \pm 0.38)

STRUCTURE

1	Solder Plating (Sn)	3	Barrier Layer (Ni)
2	Bottom Electrode (Ag)	4	Overcoat

ELECTRICAL SPECIFICATION & RANGE

SIZE (inches)	RESISTANCE (mΩ)	POWER RATING AT 70°C (W)	TOLERANCE AVAILABLE	TEMPERATURE COEFFICIENT OF RESISTANCE (PPM) (10-6/°C)	MAXIMUM RATED CURRENT (A)	DIMENSIONS UNITS: (MM).			
						L	W	T	C
2512	0.50	1	J	±50	44.7	6.35 ±0.25	3.18 ±0.25	1.25 ±0.20	1.30 ±0.38
2512	0.75	1	F, J	±50	36.5	6.35 ±0.25	3.18 ±0.25	0.75 ±0.20	1.30 ±0.38
2512	1.00	1	F, J	±50	31.6	6.35 ±0.25	3.18 ±0.25	0.65 ±0.20	1.30 ±0.38
2512	1.50	1	F, J	±50	25.8	6.35 ±0.25	3.18 ±0.25	0.45 ±0.20	1.30 ±0.38
2512	2.00	1	F, J	±50	22.4	6.35 ±0.25	3.18 ±0.25	0.35 ±0.20	1.30 ±0.38
2512	2.50	1	F, J	±100	20.0	6.35 ±0.25	3.18 ±0.25	0.65 ±0.20	1.30 ±0.38
2512	3.00	1	F, J	±100	18.3	6.35 ±0.25	3.18 ±0.25	0.55 ±0.20	1.30 ±0.38
2512	4.00	1	F, J	±100	15.8	6.35 ±0.25	3.18 ±0.25	0.45 ±0.20	1.30 ±0.38
2512	5.00	1	F, J	±100	14.1	6.35 ±0.25	3.18 ±0.25	0.35 ±0.20	1.30 ±0.38
2512	6.00	1	F, J	±100	12.9	6.35 ±0.25	3.18 ±0.25	0.32 ±0.20	1.30 ±0.38
2512	6.50	1	F, J	±100	12.4	6.35 ±0.25	3.18 ±0.25	0.30 ±0.20	1.30 ±0.38
2512	7.00	1	F, J	±100	12.0	6.35 ±0.25	3.18 ±0.25	0.27 ±0.20	1.30 ±0.38
2512	8.00	1	F, J	±100	11.18	6.35 ±0.25	3.18 ±0.25	0.25 ±0.20	1.30 ±0.38
2512	9.00	1	F, J	±100	10.5	6.35 ±0.25	3.18 ±0.25	0.25 ±0.20	1.30 ±0.38
2512	10.00	1	F, J	±100	10.0	6.35 ±0.25	3.18 ±0.25	0.25 ±0.20	1.30 ±0.38

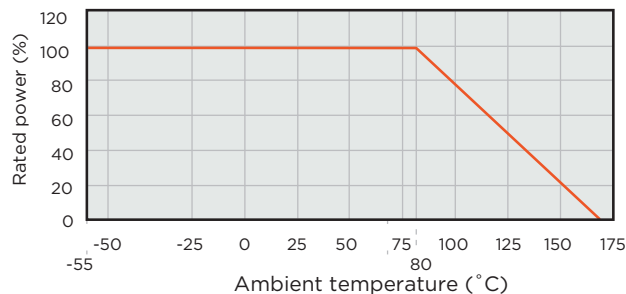
NOTE: Overload Voltage=2.5*√(P*R).

STANDARD RESISTANCE VALUES AND CORRESPONDING CODES

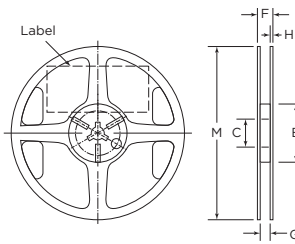


RESISTANCE (mΩ)	P/N CODE	MARKING CODE	RESISTANCE (mΩ)	P/N CODE	MARKING CODE	RESISTANCE (mΩ)	P/N CODE	MARKING CODE
0.50	M500	M50	4.00	4M00	R004	9.00	9M00	R009
0.75	M750	M75	4.50	4M50	4M5	10.00	10M0	R010
1.00	1M00	R001	5.00	5M00	R005			
1.50	1M50	1M5	5.50	5M50	5M5			
2.00	2M00	R002	6.00	6M00	R006			
2.50	2M50	2M5	6.50	6M50	6M5			
3.00	3M00	R003	7.00	7M00	R007			
3.50	3M50	3M5	8.00	8M00	R008			

DERATING CURVE



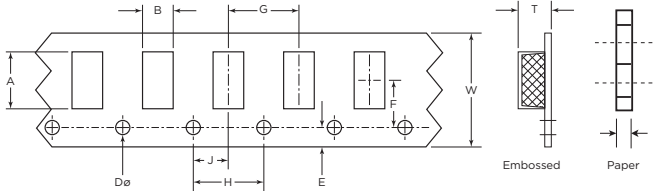
REEL SPECIFICATIONS



Unit: mm (inch)					
C	E	F	G	H	M
13.0 ± 0.2 (0.51 ± 0.008)	60.0 ± 1.0 (2.36 ± 0.03)	11.4 ± 1.0 (0.45 ± 0.04)	9.0 ± .3 (0.35 ± 0.012)	1.5 ± .3 (0.06 ± 0.012)	180 ± 2.0 (7.09 ± 0.08)

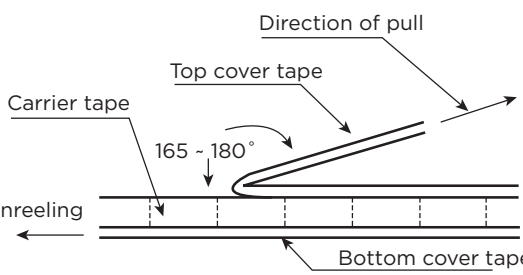
Minimum of 30 empty pockets at the beginning of reel, 65 minimum empty pockets at the end.

TAPE SPECIFICATIONS



Units: mm											
TAPE	SIZE (in)	A	B	W	E	F	T	G	H	J	Dø
Plastic	2512	6.9 ± 0.2	3.6 ± 0.2	12.0 ± 0.1	1.75 ± 0.1	5.5 ± 0.5	0.85 ± 0.1	8.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	1.5 + 0.1-0

PEEL BACK FORCE AND DIRECTION DIAGRAM



Peel back force and direction of peel back angle should follow EIA481-1-A. Peel back force should be between 0.1N - 1.3N and peel back angle of 165° - 180°.

ENVIRONMENTAL CHARACTERISTICS

TEST	REQUIREMENT	TEST METHOD
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	IEC60115-1 4.8 JIS-C-5201-1 4.8 +25°C-125°C, 25°C is the reference temperature
Short Time Overload	±1.0%	IEC60115-1 4.13 JIS-C-5201-1 4.13 5* rated power for 5 seconds
Insulation Resistance	≥10G	IEC60115-1 4.6 JIS-C-5201-1 4.13 100V DC for 1 minute
Endurance	±1.0%	IEC60115-1 4.25 JIS-C-5201-1 4.25.1 70±2°C, rated power for 1000 hrs with 1.5 hrs "ON" and 0.5 hr "OFF"
Biased Humidity	±1.0%	MIL-STD-202 Method 103 1000 hrs 85°C/85%RH 10% of operating power
Dry Heat	±1.0%	IEC60115-1 4.23.2 JIS-C-5201-1 4.23.2 at +170°C for 1000 hrs
Bending Strength	±1.0%	JIS-C-5201-1 4.33 IEC-60115-1 4.33 Bending width 2mm once for 5 seconds
Solderability	95% min. coverage	JIS-C-5201-1 4.17 IEC-60115-1 4.17 245±5°C for 3 seconds
Resistance to Soldering Heat	±0.5%	JIS-C-5201-1 4.18 IEC-60115-1 4.18 260±5°C for 10 seconds
Rapid Change of Temperature	±1.0%	JIS-C-5201-1 4.19 IEC-60115-1 4.19 -55°C to +155°C, 5 cycles
Low Temperature Storage	±1.0%	IEC60115-1 4.23.4 JIS-C-5201-1 4.23.4 at -55°C for 2 hrs

RCWV(Rated Continuous Working Voltage)= $\sqrt{P \cdot R}$ or Max. Operating Voltage whichever is lower.

Storage Temperature: 15-28°C; Humidity: < 80%RH