0805

Metal Alloy Chip Resistors

Features

- Low-resistance alloy resistor for surface mounting.
- Complies with RoHS requirements.
- Conforms to automotive AEC-Q200 tests.



Type designation

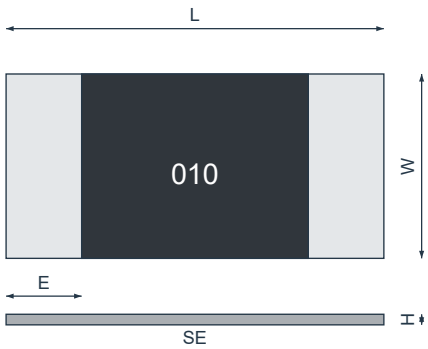
Size	Type	Rated power	Tolerance	Resistance range
0805	SE (small electrode)	3 W	D:0.5% F:1% G:2% J:5%	R000
0805	SE (small electrode)	1W	D:0.5% F:1% G:2% J:5%	R003
0805	SE (small electrode)	0.5W	D:0.5% F:1% G:2% J:5%	R004-R040

Ordering code

Manufacturer	Size	Type	Power	Resistance	Tolerance	Quantity
INLANX	0805	SE (small electrode)	0.5W(1D)	R003 R010 ……	0.5%=D 1%=F 2%=G 5%=J	0805(5)

Example: INLANX0805SE1DR003F5

Construction and dimensions (mm)

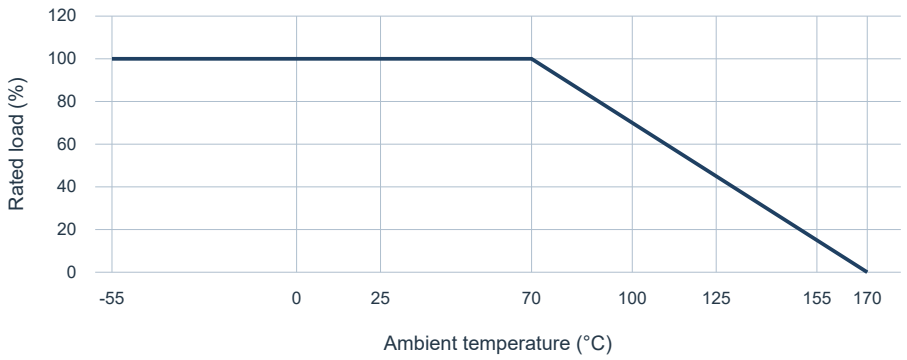


Size	Type	Symbol	Dimension (mm)	Resistance
0805	SE	L	2.0±0.2	-
0805	SE	W	1.25±0.2	-
0805	SE	E	0.35±0.2	-
0805	SE	H	0.5±0.1	-

Electrical specifications

Type	Power	Resistance	Alloy	TCR ppm/°C	Operating temp.	Tolerance	Insulation	Max. voltage V
SE (0805)	3.0 W	R000	Copper	/	-55°C~+170°C	/	Over 100MΩ	(P*R)½
SE (0805)	0.5 W	≤0.2mΩ	Copper	/	-55°C~+170°C	/	Over 100MΩ	(P*R)½
SE (0805)	1W	R003	MnCu	±50 ppm/°C	-55°C~+170°C	0.5% 1% 2% 5%	Over 100MΩ	(P*R)½
SE (0805)	0.5 W	4mΩ≤R ≤40mΩ	MnCu	±50 ppm/°C	-55°C~+170°C	0.5% 1% 2% 5%	Over 100MΩ	(P*R)½

Power derating



100% rated power at and below 70°C; linear derating above 70°C to zero at 170°C.

Reliability tests

Reference: IEC 60115, IEC 60068 and JIS-C 5201-1.

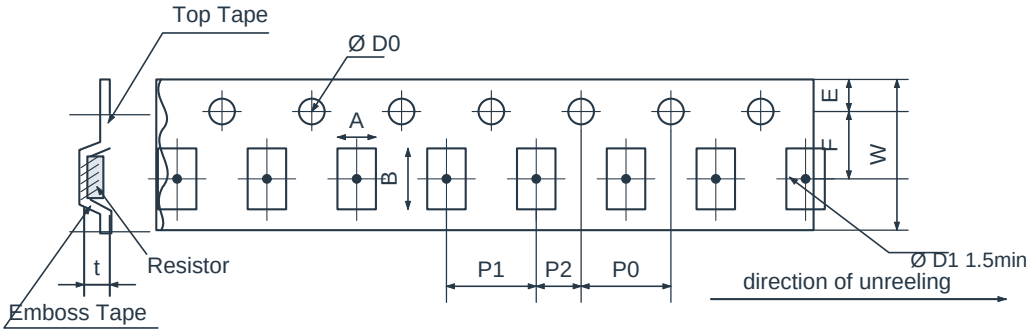
Test	Conditions / method	Requirements
Temperature coefficient	Measure at 25°C and 125°C; TCR=(R2-R1)/(R1×(T2-T1))×10^6.	Refer to electrical TCR specification
Short-time overload	5 times rated power for 5 s. Maximum 50 A at 0 Ω.	ΔR≤±(1%+0.05mΩ)
Insulation resistance	Apply 100±15 V DC between electrodes and substrate for 60 s.	>100 MΩ
Withstand voltage	Apply AC with RMS value equal to maximum overload voltage between electrodes and substrate, ramping at about 100 V/s; hold for 60±5 s.	No breakdown or arcing
Solderability	Solder bath at 245±5°C for 2±0.5 s.	Electrode solder coverage >95%
Soldering heat	Solder bath at 270±5°C for 10±1 s.	ΔR≤±(0.5%+0.05mΩ); no visible damage
Bending	Bend by 2 mm; hold for 60±5 s.	ΔR≤±(0.5%+0.05mΩ); no mechanical damage
Solvent resistance	Isopropanol (IPA), 23±5°C for 10 h.	No visible damage
High-temperature exposure	170±2°C for 1000 h; measure after resting for 1 h.	ΔR≤±(1%+0.05mΩ)
Low-temperature exposure	-55±2°C for 1000 h; measure after resting for 1 h.	ΔR≤±(0.5%+0.05mΩ)
Temperature cycling	-55°C for 30 min → room temperature for 5 min → 155°C for 30 min; 1000 cycles.	ΔR≤±(0.5%+0.05mΩ)
Load life	70±2°C, rated power, 1.5 h ON / 0.5 h OFF for 1000 h.	ΔR≤±(1%+0.05mΩ)
Moisture with load	85±2°C, 85±3% RH, rated power, 1.5 h ON / 0.5 h OFF for 1000 h.	ΔR≤±(1%+0.05mΩ)

Storage and handling

Store at 5-35°C and 45-75% RH. Storage life: 1 year.

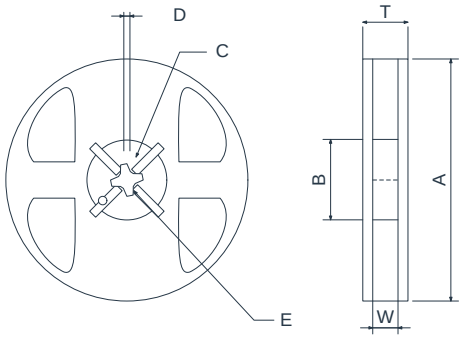
Avoid prolonged direct sunlight, moisture, dust and gases that impair solderability, including hydrogen chloride, sulfurous acid gas and hydrogen sulfide.

Carrier tape dimensions (mm)



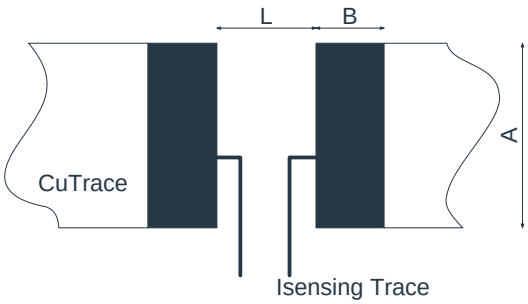
A	B	W	F	E	P1	P2	P0	D0	t
1.65±0.05	2.4±0.1	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.05	1.5~1.6	0.8±0.1

Reel dimensions (mm)



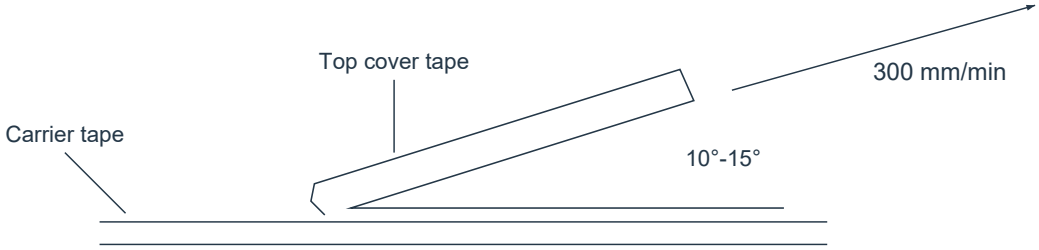
Size	A	B	C	D	E	T	W
Reel	178±2.0	60±1.0	13±1.0	2.0±0.5	>22	11.4±0.5	9.0±0.3

Recommended solder pads (mm)



Type	A	B	L
SE	1.5	1.0	1.0

Cover tape peel force



Top cover tape peel speed: 300 mm/min; angle: 10°-15°; peel force: 0.1-0.7 N.