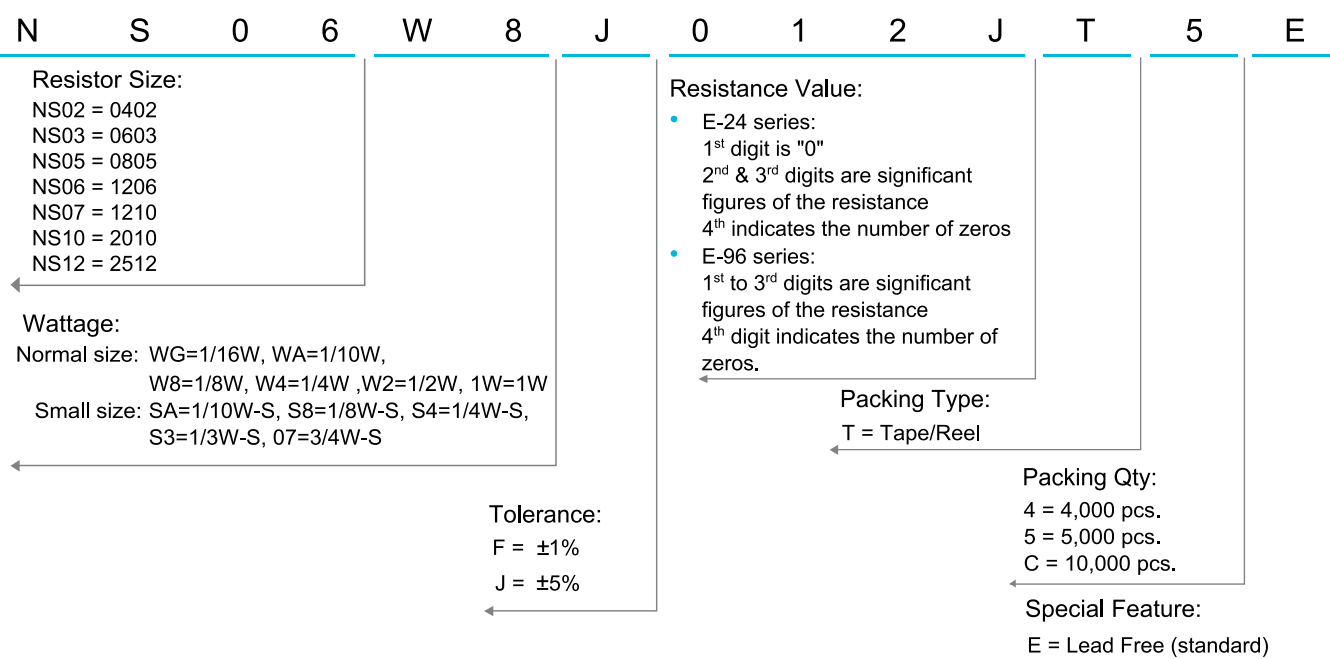


Anti-Sulfurized Thick Film Chip Resistors

Performance Specification

Test Item	Test Methods	Determine Specification
Temperature Coefficient	Measure between: -55 °C ~ +125 °C	$1\Omega \leq R \leq 10\Omega$: $\pm 400\text{PPM}/^\circ\text{C}$ $10\Omega < R \leq 100\Omega$: $\pm 200\text{PPM}/^\circ\text{C}$ $100\Omega < R \leq 10\text{M}\Omega$: $\pm 100\text{PPM}/^\circ\text{C}$
Short Time Overload	2.5 x rated voltage or Max. Overload Voltage whichever is lower for 5 seconds, then check the resistance.	$\pm 1\%$: $\pm (1.0\% + 0.1\Omega)\text{Max}$ $\pm 5\%$: $\pm (2.0\% + 0.1\Omega)\text{Max}$
Terminal Bending	Duration: 60s \pm 5s, then check the resistance.	$\pm (1.0\% + 0.05\Omega)\text{Max}$
Solderability	245 \pm 3 °C, 2 ~ 3s	95% coverage Min
Soldering Heat	260 \pm 5 °C, 10 \pm 1s	$\pm (1.0\% + 0.05\Omega)\text{Max}$
Moisture Resistance	25 °C ~ 65 °C, 90 ~ 100%RH, 2.5H, 65 °C 90 ~ 100%RH, 3H, 65 °C ~ 25 °C, 80 ~ 100%RH, 2.5H, 10 cycles, Measurement at 24 hours after test conclusion. MIL-STD-202 Method 106	$\pm 1\%$: $\pm (1.0\% + 0.1\Omega)\text{Max}$ $\pm 5\%$: $\pm (3.0\% + 0.1\Omega)\text{Max}$
Biased Humidity	10% rated power, 85 °C/85%RH, 1000H, Measurement at 24 hours after test conclusion. MIL-STD-202 Method 103	$\pm 1\%$: $\pm (1.0\% + 0.1\Omega)\text{Max}$ $\pm 5\%$: $\pm (3.0\% + 0.1\Omega)\text{Max}$
Dielectric Withstanding Voltage	Resistor shall be clamped in the trough of 90 metallic V-block and shall be tested at AC potential respectively specified in the given list of each product type for 60 ~ 70s.	No evidence of flashover, mechanical damage, arcing or insulation breakdown.
Temperature Cycling	-55 \pm 3 °C 30min ~ normal temperature 10min-15min ~ 155 \pm 2 °C 30min ~ normal temperature 10min-15min 100 cycles, Measurement at 24 hours after test conclusion. JESD22 Method JA-104	$\pm (1.0\% + 0.1\Omega)\text{Max}$
Load Life	125 °C, at RCWV or Max. Working Voltage whichever less, 1,000 hours (1.5 hours "ON", 0.5 hours "OFF") Measurement at 24 \pm 2 hours after test conclusion. MIL-STD-202 Method 108	$\pm 1\%$: $\pm (1.0\% + 0.1\Omega)\text{Max}$ $\pm 5\%$: $\pm (3.0\% + 0.1\Omega)\text{Max}$
Anti-Sulfurized test	H ₂ S 1000ppm, 25°C \pm 2°C, 90% RH, 720H	$\pm (0.5\% + 0.1\Omega)\text{Max}$
Anti-Sulfurized test (ASTMB-809)	H ₂ S 1000ppm, 60°C \pm 2°C, 70% RH, 720H	$\pm (0.5\% + 0.1\Omega)\text{Max}$

Ordering Procedure: Ex.: NS06 1/8W, 5%, 1.2 Ω , T/R5000

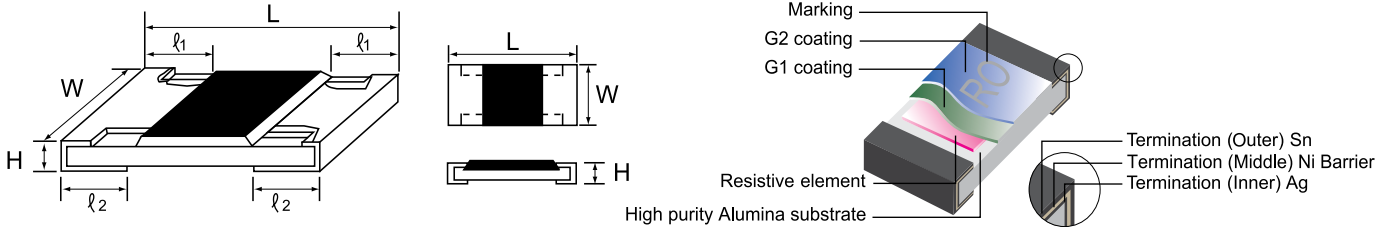


Anti-Sulfurized Thick Film Chip Resistors

Features

- Anti-Sulfurized
- Suitable for reflow & wave soldering.
- Application, power
- The relevant provisions of the AEC-Q200.

Dimension



Type	Max Working Voltage	Max Overload Voltage	Dielectric	Resistance Value of Jumper	Rate Current of Jumper	Max Current of Jumper	Operating Temperature
NS02	50V	100V	100V	< 50mΩ	1A	2A	-55 ~ +155°C
NS03	75V	150V	300V	< 50mΩ	1A	2A	
NS05	150V	300V	500V	< 50mΩ	2A	5A	
NS06	200V	400V	500V	< 50mΩ	2A	10A	
NS07	200V	500V	500V	< 50mΩ	2A	10A	
NS10	200V	500V	500V	< 50mΩ	2A	10A	
NS12	200V	500V	500V	< 50mΩ	2A	10A	

Type	Power (70°C)	L (mm)	W (mm)	H (mm)	l1 (mm)	l2 (mm)	Resistance Range 1%(E96), 5%(E24)
NS02	1/16W	1.00±0.10	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10	1%, 5%: 1Ω ~ 10M 0Ω
NS03	1/16W (1/10W-S)	1.60±0.10	0.80±0.10	0.45±0.10	0.30±0.20	0.30±0.20	
NS05	1/10W (1/8W-S)	2.00±0.15	1.25 ^{+0.15} -0.10	0.55±0.10	0.40±0.20	0.40±0.20	
NS06	1/8W (1/4W-S)	3.10±0.15	1.55 ^{+0.15} -0.10	0.55±0.10	0.45±0.20	0.45±0.20	
NS07	1/4W (1/3W-S)	3.10±0.10	2.60±0.20	0.55±0.10	0.50±0.25	0.50±0.20	
NS10	1/2W (3/4W-S)	5.00±0.10	2.50±0.20	0.55±0.10	0.60±0.25	0.50±0.20	
NS12	1W	6.35±0.10	3.20±0.20	0.55±0.10	0.60±0.25	1.80±0.25	

Derating Curve

