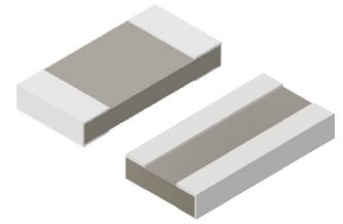


Features:

- Chip size from 0603 to 2512
- High thermal conductivity AlN substrate
- Low capacitance
- High insulation resistance between terminals
- RoHS compliant, REACH compliant, lead free, and halogen free



| Electrical Specifications | | | | | | |
|---------------------------|---|---|--|----------------------------------|--------------------------------|-----------------------------|
| Type/Code | Thermal Resistance (°C/W), R _t | Thermal Conductance (mW/°C), G _t | Dielectric Withstanding Voltage kV _{AC} , RMS (60 Hz) | Operating Temperature Range (°C) | Storage Temperature Range (°C) | Substrate Material |
| TMJ0603C_0048 | 21 | 48 | > 1.5 | -55°C to +155°C | -55°C to +155°C | Aluminum nitride (170 W/mK) |
| TMJ0612G_0216 | 5 | 216 | | | | |
| TMJ1206G_0055 | 18 | 55 | | | | |
| TMJ1225G_0216 | 5 | 216 | | | | |
| TMJ2512G_0053 | 19 | 53 | | | | |

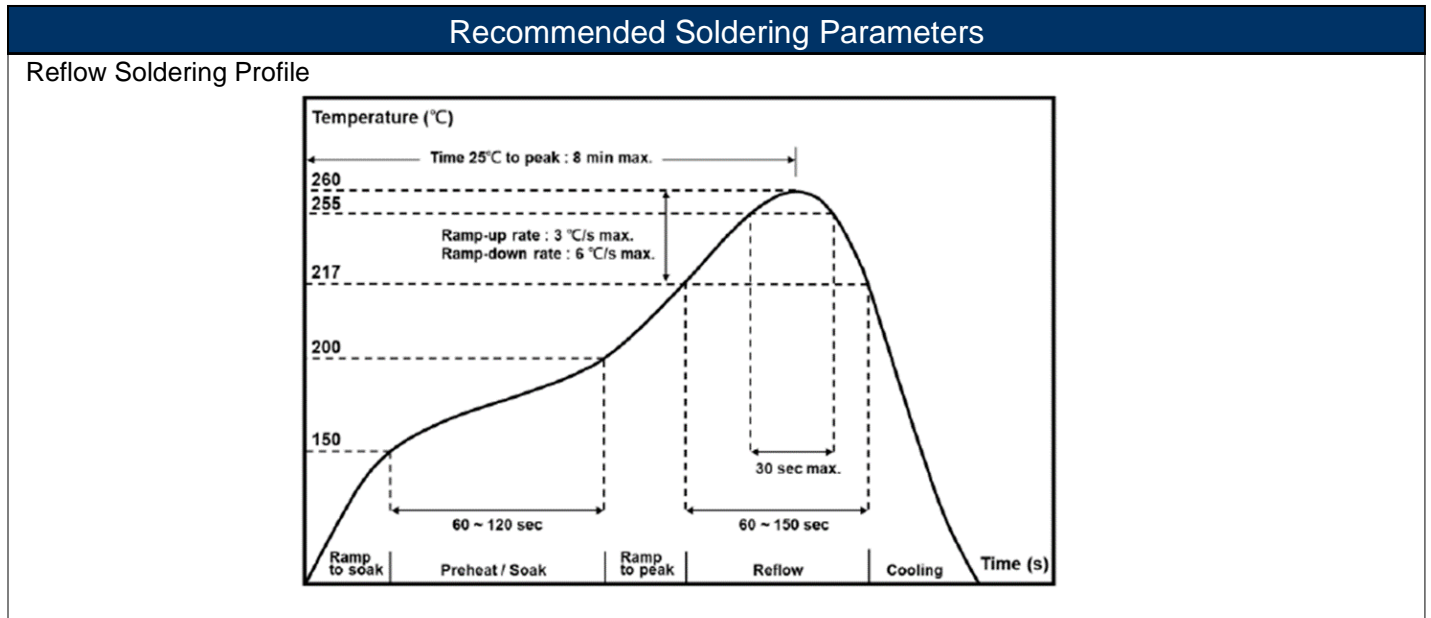
Note: $R_t = \frac{L}{k(H*W)}$; $G_t = 1/R_t$

k = 170 W/mK (the thermal conductivity of AlN)

| Construction Diagram | | | | | | | | | | | | | | | |
|----------------------|--|----------------------------|-------------|---|----------------------------|---|---------------------|---|------------------------|---|----------------------|---|----------------|---|---------------------|
| | <table border="1"> <thead> <tr> <th>Reference</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Aluminum Nitride Substrate</td> </tr> <tr> <td>2</td> <td>Top Inner Electrode</td> </tr> <tr> <td>3</td> <td>Bottom Inner Electrode</td> </tr> <tr> <td>4</td> <td>Side Inner Electrode</td> </tr> <tr> <td>5</td> <td>Nickel Barrier</td> </tr> <tr> <td>6</td> <td>Solder Coating (Sn)</td> </tr> </tbody> </table> | Reference | Description | 1 | Aluminum Nitride Substrate | 2 | Top Inner Electrode | 3 | Bottom Inner Electrode | 4 | Side Inner Electrode | 5 | Nickel Barrier | 6 | Solder Coating (Sn) |
| | Reference | Description | | | | | | | | | | | | | |
| | 1 | Aluminum Nitride Substrate | | | | | | | | | | | | | |
| | 2 | Top Inner Electrode | | | | | | | | | | | | | |
| | 3 | Bottom Inner Electrode | | | | | | | | | | | | | |
| | 4 | Side Inner Electrode | | | | | | | | | | | | | |
| 5 | Nickel Barrier | | | | | | | | | | | | | | |
| 6 | Solder Coating (Sn) | | | | | | | | | | | | | | |

| Mechanical Specifications | | | | | |
|---------------------------|---------------|---------------|---------------|---------------|--------|
| Type/Code | L | W | H | i | Unit |
| TMJ0603C_0048 | 0.063 ± 0.005 | 0.031 ± 0.005 | 0.022 ± 0.005 | 0.016 ± 0.005 | inches |
| | 1.60 ± 0.13 | 0.80 ± 0.13 | 0.55 ± 0.13 | 0.40 ± 0.13 | mm |
| TMJ0612G_0216 | 0.063 ± 0.005 | 0.126 ± 0.005 | 0.028 ± 0.005 | 0.016 ± 0.005 | inches |
| | 1.60 ± 0.13 | 3.20 ± 0.13 | 0.70 ± 0.13 | 0.40 ± 0.13 | mm |
| TMJ1206G_0055 | 0.126 ± 0.005 | 0.063 ± 0.005 | 0.028 ± 0.005 | 0.020 ± 0.005 | inches |
| | 3.20 ± 0.13 | 1.60 ± 0.13 | 0.70 ± 0.13 | 0.50 ± 0.13 | mm |
| TMJ1225G_0216 | 0.126 ± 0.005 | 0.252 ± 0.005 | 0.028 ± 0.005 | 0.024 ± 0.005 | inches |
| | 3.20 ± 0.13 | 6.40 ± 0.13 | 0.70 ± 0.13 | 0.60 ± 0.13 | mm |
| TMJ2512G_0053 | 0.252 ± 0.005 | 0.126 ± 0.005 | 0.028 ± 0.005 | 0.024 ± 0.005 | inches |
| | 6.40 ± 0.13 | 3.20 ± 0.13 | 0.70 ± 0.13 | 0.60 ± 0.13 | mm |

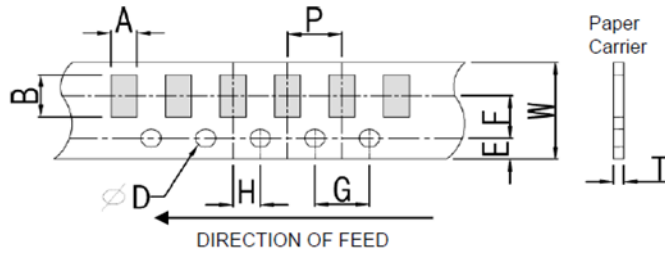
| Performance Characteristics | | | |
|-----------------------------|---------------------------------------|--|-----------------------------------|
| Test | Test Method | Test Condition | Test Specification |
| Solderability | JIS-C-5201-1 4.17 IEC-60115-1 4.17 | 245 ± 5°C for 3 seconds | >95% coverage No visual damage |
| Solder Mounting Integrity | MIL-PRF-55342 method par. 4.8.13.1 | For size 0603 applied 9.8N Sizes 0612 and above applied 19.6N for 60 ± 1 seconds | No visual damage |
| Bending Strength | JIS-C-5201-1 4.33 IEC-60115-1 4.33 | Bending once for 5 seconds D: 0603 = 5mm 1206 - 0613 = 3mm 2512 - 1225 = 2mm | No visual damage |



Reel Specifications

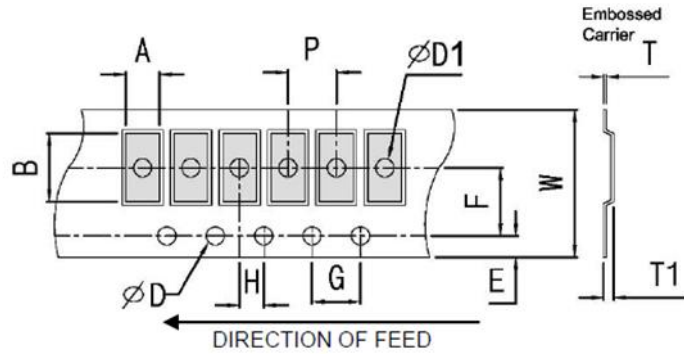
| Size | A | ØB | ØC | ØD | W | ØM | Unit |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| 0603, 0612, 1206 | 0.079 ± 0.020 | 0.531 ± 0.039 | 0.827 ± 0.039 | 2.362 ± 0.039 | 0.453 ± 0.079 | 7.008 ± 0.079 | inches |
| | 2.00 ± 0.50 | 13.50 ± 1.00 | 21.00 ± 1.00 | 60.00 ± 1.00 | 11.50 ± 2.00 | 178.00 ± 2.00 | mm |
| 2512, 1225 | 0.079 ± 0.020 | 0.531 ± 0.039 | 0.827 ± 0.039 | 2.362 ± 0.039 | 0.630 ± 0.079 | 7.008 ± 0.079 | inches |
| | 2.00 ± 0.50 | 13.50 ± 1.00 | 21.00 ± 1.00 | 60.00 ± 1.00 | 16.00 ± 2.00 | 178.00 ± 2.00 | mm |

Taping Specifications – Paper Tape



| Size | A | B | W | E | F | Unit |
|-----------|---------------|---------------|---------------|--------------------|---------------|--------|
| 0603 | 0.041 ± 0.008 | 0.071 ± 0.008 | 0.315 ± 0.008 | 0.069 ± 0.004 | 0.138 ± 0.002 | inches |
| | 1.05 ± 0.20 | 1.80 ± 0.20 | | | | mm |
| 0612 | 0.112 ± 0.008 | 0.120 ± 0.008 | 8.00 ± 0.20 | 1.75 ± 0.10 | 3.50 ± 0.05 | inches |
| | 2.85 ± 0.20 | 3.05 ± 0.20 | | | | mm |
| 1206 | 0.075 ± 0.008 | 0.138 ± 0.008 | | | | inches |
| | 1.90 ± 0.20 | 3.50 ± 0.20 | | | | mm |
| Type/Code | G | H | T | ØD | P | Unit |
| 0603 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.024 ± 0.004 | 0.059 +0.004/-0.00 | 0.157 ± 0.004 | inches |
| | | | 0.60 ± 0.10 | | | mm |
| 0612 | 4.00 ± 0.10 | 2.00 ± 0.05 | 0.030 ± 0.004 | 1.50 +0.10/-0.00 | 4.00 ± 0.10 | inches |
| | | | 0.75 ± 0.10 | | | mm |
| 1206 | | | 0.030 ± 0.004 | | | inches |
| | | | 0.75 ± 0.10 | | | mm |

Taping Specifications – Plastic Tape



| Size | A | B | W | E | F | G | Unit |
|------------|---------------|---------------|--------------------|---------------|---------------|---------------|--------|
| 1225, 2512 | 0.134 ± 0.008 | 0.264 ± 0.008 | 0.472 ± 0.004 | 0.069 ± 0.004 | 0.217 ± 0.020 | 0.157 ± 0.004 | inches |
| | 3.40 ± 0.20 | 6.70 ± 0.20 | 12.00 ± 0.10 | 1.75 ± 0.10 | 5.50 ± 0.50 | 4.00 ± 0.10 | mm |
| | H | T | ØD | ØD1 | T1 | P | Unit |
| 1225, 2512 | 0.079 ± 0.002 | 0.009 ± 0.004 | 0.059 +0.004/-0.00 | 0.059 ± 0.004 | 0.033 ± 0.006 | 0.157 ± 0.004 | inches |
| | 2.00 ± 0.05 | 0.23 ± 0.10 | 1.50 +0.10/-0.00 | 1.50 ± 0.10 | 0.85 ± 0.15 | 4.00 ± 0.10 | mm |

RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union’s directive regarding “Restrictions on Hazardous Substances” (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

| RoHS Compliance Status | | | | | | |
|-------------------------|--------------------|----------------------------|--------------------------------|-----------------------------------|--|---------------------------------------|
| Standard Product Series | Description | Package / Termination Type | Standard Series RoHS Compliant | Lead-Free Termination Composition | Lead-Free Mfg. Effective Date (Std Product Series) | Lead-Free Effective Date Code (YY/WW) |
| TMJ | Thermal SMD Jumper | SMD | YES | 100% Matte Sn over Ni | Always | Always |

“Conflict Metals” Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the “conflict region” of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to “REACH”

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, “The Registration, Evaluation, Authorization and Restriction of Chemicals”, otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

| | | | | | | | | | | | | |
|----------------|--------------------|----------|-----------|----------|-----------|--------------|------------------|----------|---------------------|----------|----------|----------|
| T | M | J | 1 | 2 | 0 | 6 | G | T | 0 | 0 | 5 | 5 |
| Product Series | | Size | Thickness | | Packaging | | | | Thermal Conductance | | | |
| TMJ | Thermal SMD Jumper | Size | Code | mm | Code | Description | Size | Quantity | Code | mW | | |
| | | 0603 | C | 0.5 | T | Paper Tape | 0603, 0612, 1206 | 5000 | 0048 | 48mW | | |
| | | 0612 | G | 0.635 | | Plastic Tape | 1225, 2512 | 4000 | 0053 | 53mW | | |
| | | 1206 | | | K | Paper Tape | 0603, 0612, 1206 | 1000 | 0055 | 55mW | | |
| | | 1225 | | | | Plastic Tape | 1225, 2512 | | 0216 | 216mW | | |
| | | 2512 | | | | | | | | | | |