



Vishay Vitramon MLCC End Termination

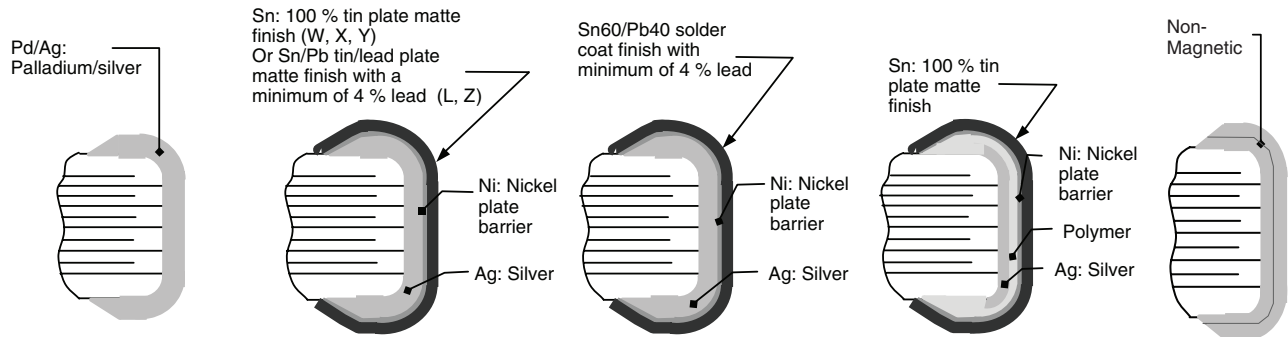


Figure 1:
Termination codes: F, M,

Figure 2:
Termination codes: L, W, X, Y, Z

Figure 3:
CDR Termination code: U

Figure 4:
Termination code: B

Figure 5:
Termination code: N

| TERMINATION CODE | TERMINATION DEFINITION | RECOMMENDED SOLDER APPLICATION |
|--|--|--|
| F, M ⁽³⁾ | Fired, thick film, silver/palladium | Conductive epoxy/Reflow solder/wave solder ⁽¹⁾ ⁽²⁾ |
| N | Fired, thick film, non magnetic material | Conductive epoxy/Reflow solder |
| W ⁽³⁾ , X, Y ⁽³⁾ | Fired, thick film silver, covered by 100 % nickel barrier plate with an outer layer of 100 % tin plate matte finish for multi-solder mounting | Wave solder ⁽¹⁾ /reflow solder/vapor phase reflow |
| L, Z ⁽³⁾ | Fired, thick film silver, cover by 100 % nickel barrier plate with an outer layer of tin/lead plate matte finish with a minimum of 4 % lead for multi-solder mounting | Wave solder ⁽¹⁾ /reflow solder/vapor phase reflow |
| U ⁽⁴⁾ | Fired, thick film silver, cover by 100 % nickel barrier plate with an outer layer of tin/lead plate finish matte with a minimum of 4 % lead for Sn60/Pb40 solder coat | Wave solder ⁽¹⁾ /reflow solder/vapor phase reflow |
| B | Fired, thick film silver, cured thick film polymer silver, covered by 100 % nickel barrier plate with an outer layer of 100 % tin plate matte finish for multi-solder mounting | Wave solder ⁽¹⁾ /reflow solder/vapor phase reflow |

Notes:

- (1) Case sizes 1210 to 1812 with a thickness > 0.049" (1.24 mm) and case sizes 1825 and larger should NOT be wave solder.
- (2) Recommend only one wave soldering pass of silver/palladium termination for non-plated terminations (F, M and N).Parts cannot be rework.
- (3) CDR and DSCC part numbers only.
- (4) CDR "U" termination code: Base metallization-barrier metal-solder coated (tin/lead alloy, with a minimum of 4 % lead). Solder has a melting point of + 200 °C or less. Solder coat thickness is a minimum of 60 inches.
 - Solder iron techniques are not recommended. For more information on soldering visit www.vishay.com/doc245034
 - Contact mlcc.specials@vishay.com with respect to specific part number requirements.



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| MLCC END TERMINATION PHYSICAL CHARACTERISTICS | | | | | | | |
|--|----------------------------|--------------------|----------------------------------|----------------------------------|-------------------------------------|---|-----------------|
| P/N TERM CODE | THICK FILM END TERMINATION | | BARRIER TERMINATION | TERMINATION FINISH | | | |
| | MATERIAL | THICKNESS (inches) | Ni PLATE THICKNESS (microinches) | Sn PLATE THICKNESS (microinches) | Sn/Pb PLATE THICKNESS (microinches) | Sn/Pb SOLDER COAT THICKNESS (microinches) | CONTENT OF LEAD |
| F, M | Ag/Pd | 0.001 min. | N/a | N/a | N/a | N/a | N/a |
| N | Ag/Pd | 0.0012 min. | N/a | N/a | N/a | N/a | N/a |
| W, X, Y | Ag | 0.001 min. | 50 min. | 100 min. | N/a | N/a | N/a |
| L, Z | Ag | 0.001 min. | 50 min. | N/a | 100 min. | N/a | 4 % min. |
| U | Ag | 0.001 min. | 50 min. | N/a | N/a | 60 min. | 4 % min. |
| B | Polymer | 0.003 min. | 50 min. | 100 min. | N/a | N/a | N/a |

Element Definition: Ag = Silver, Pd = Palladium, Ni = Nickel, Sn = Tin, Pb = Lead