



## Vishay Vitramon MLCC End Termination

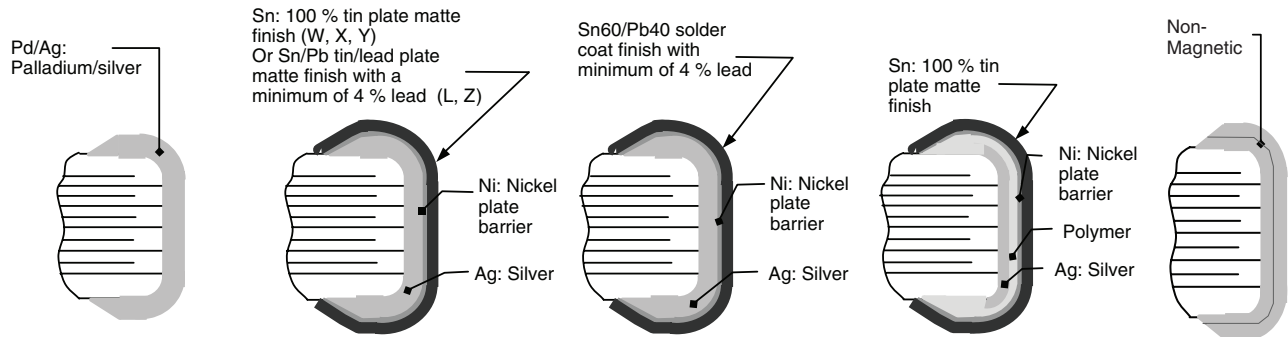


Figure 1:  
Termination codes: F, M,

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 <sup>(3)</sup>	Fired, thick film, silver/palladium	Conductive epoxy/Reflow solder/wave solder <sup>(1)</sup> <sup>(2)</sup>
N	Fired, thick film, non magnetic material	Conductive epoxy/Reflow solder
W <sup>(3)</sup> , X, Y <sup>(3)</sup>	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 <sup>(1)</sup> /reflow solder/vapor phase reflow
L, Z <sup>(3)</sup>	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 <sup>(1)</sup> /reflow solder/vapor phase reflow
U <sup>(4)</sup>	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 <sup>(1)</sup> /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 <sup>(1)</sup> /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](http://www.vishay.com/doc245034)
  - Contact [mlcc.specials@vishay.com](mailto:mlcc.specials@vishay.com) with respect to specific part number requirements.



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<b>MLCC END TERMINATION PHYSICAL CHARACTERISTICS</b>							
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