

Moisture / Reflow Sensitivity Classification

Moisture/Reflow Sensitivity Classification (MSL), as defined in IPC/JEDEC Standard J-STD-020, is not offered as part of Bourns® Polymeric Thermal Cutoff (P-TCO) standard product ratings or packaging labels as the J-STD-020 standard applies to non-hermetic solid state surface mount devices and does not include passive resistive components. However, as a courtesy to address frequent customer requests, Bourns recommends that P-TCO passive components be handled according to the Floor Life and MSL Classification tables below.

Bourns has determined that if IPC/JEDEC Standard J-STD-020 were to be applied to Bourns® Polymeric Thermal Cutoff products:

1. The Bourns® P-TCO model series with an MSL Classification level 1 would have a moisture sensitivity rating equivalent to IPC/JEDEC Standard J-STD-020 MSL 1, specifying an unlimited floor life under the conditions 30 °C / 85 % RH; and
2. The Bourns® P-TCO model series with an MSL Classification level 2a would have a moisture sensitivity rating equivalent to IPC/JEDEC Standard J-STD-020 MSL 2a.

An IPC/JEDEC Standard J-STD-020 MSL 2a rating means:

1. These components are sensitive to moisture.
2. Once these components are removed from the moisture barrier bag packaging at factory ambient temperature of $\leq 30\text{ °C}/60\text{ \% RH}$, they must be assembled within 4 weeks from the date the bag was opened.
3. If the above conditions are exceeded, a rebake may be necessary prior to assembly to ensure component compliance with stated performance specifications. Recommended rebake condition: $40\text{ °C} / 5\text{ \% RH}$ for 29 days or contact Bourns.

Floor Life		
MSL Classification	Time	Condition
1	Unlimited	$\leq 30\text{ °C} / 85\text{ \% RH}$
2	1 year	$\leq 30\text{ °C} / 60\text{ \% RH}$
2a	4 weeks	
3	168 hours	
4	72 hours	
5	48 hours	
5a	24 hours	
6	Time on Label (TOL)	

The Process Sensitivity Level (PSL) classification of Bourns® P-TCO devices as defined in IPC/JEDEC J-STD-075 is R5G; a component that has a maximum processing temperature recommendation of 255 °C with a maximum upper variation of 5 °C.

MSL Classification									
Structure	Model Series	1	2	2a	3	4	5	5a	6
Surface Mount	P-TCO-U			•					
	P-TCO-N			•					



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