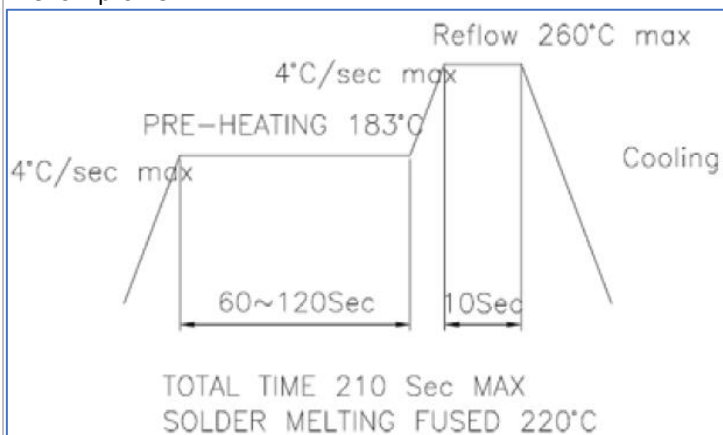


ECN/PCN No.: 3728

For Manufacturer			
Product Description: Ultra-Low Noise XO / VCXO	Abraccon Part Number / Part Series: ABLNO	<input checked="" type="checkbox"/> Documentation only	<input checked="" type="checkbox"/> Series
		<input checked="" type="checkbox"/> ECN	<input type="checkbox"/> Part Number
		<input type="checkbox"/> EOL	
Affected Revision: D	New Revision: E	Application:	<input type="checkbox"/> Safety
			<input checked="" type="checkbox"/> Non-Safety

Prior to Change:

Reflow profile:



After Change:

Reflow profile:

Table 1
SnPb Eutectic Process
Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2
Pb-Free Process
Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T _{smin})	100°C	150°C
Temperature maximum (T _{smax})	150°C	200°C
Time (T _{smin} to T _{smax}) (t _s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T _{smax} to T _p)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T _L)	183°C	217°C
Time at liquidous (t _L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T _p)*	see Table 1	see Table 2
Time (t _p)** within 5°C of the specified classification temperature (T _c)	20 sec.	30 sec.
Ramp-down rate (T _p to T _{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.
**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

Cause/Reason for Change: Updated reflow profile to JEDEC J-STD-020.		
Change Plan		
Effective Date: 09/01/2022	Additional Remarks: n/a	
Change Declaration: The changes attached do not negatively impact electrical or mechanical performance of this series.		
Issued Date: 09/01/2022	Issued By: <i>Brooke Cushman</i> Product Engineer	Issued Department: Engineering
Approval: <i>Thomas Culhane</i> Engineering Director	Approval: <i>Reuben Quintanilla</i> Quality Director	Approval: <i>Ying Huang</i> Purchasing Director
For Abracon EOL only		
Last Time Buy (if applicable): n/a	Alternate Part Number / Part Series: n/a	
Additional Approval: n/a	Additional Approval: n/a	Additional Approval: n/a
Customer Approval (If Applicable)		
Qualification Status: <div style="text-align: center;"><input type="checkbox"/> Approved <input type="checkbox"/> Not accepted</div> <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
Customer Part Number:	Customer Project:	
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		