

IN-CABIN ELECTRONICS

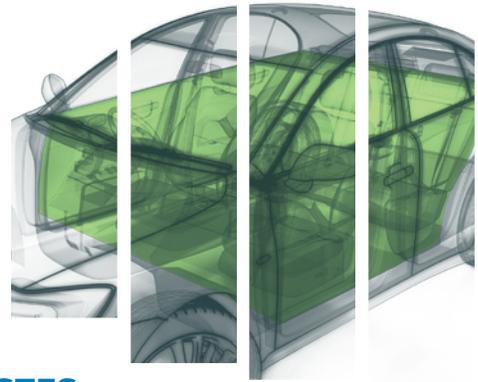
Assembly Technology Enablers for Lowest Total Cost of Ownership

Electronics are increasingly used in all passenger and commercial vehicles. What is considered as a luxury one year is expected as standard the next. This desire to include more electronics into the vehicle cabin has started to drive miniaturization which had not been a priority in the past. Automotive Electronics companies are under continual pressure to reduce the cost of their systems, against a back-drop of increasing raw material and energy prices.

Alpha has a range of products that can reduce the cost of producing assemblies through process elimination, energy reduction and reduced reliance on precious metals whilst ensuring reliability.



PRODUCT TYPE	PRODUCT NAME	PERFORMANCE IMPACT
Solder Paste	ALPHA® OM-550 HRL1	Reduced defects/rework and increased throughput
	ALPHA® CVP-390 SAC305 and ALPHA® SACX® Plus	Same chemistry with alloys optimised for electronics environment within vehicle
Liquid Flux	EF-6000	Pin testable low solid content flux with exceptional electrical reliability
	EF-2210	Thermally stable VOC-free flux to help meet air quality regulation
	EF-6808HF	Wide process window halogen free flux with robust soldering performance
Cored Wire	ALPHA® Telecore® HF-850	Increased throughput Improved product life
Bar Solder	ALPHA® SAC305	Optimise alloy choice/cost for application
	ALPHA® SACX® Plus 0807	Reduce process defects and cost of waste
	ALPHA® SACX® Plus 0307	



REVOLUTIONARY LOW TEMPERATURE SOLDER PASTES

ALPHA® OM-550

ALPHA® OM-550 HRL1 solder paste is a revolutionary advancement in low temperature solder pastes. The HRL1 alloy reduces board warpage and stress on device components by lowering soldering temperature 50°C below SAC alloys. This results in a highly reliable and energy efficient soldering process which is of most importance to the In-Cabin area of motor vehicles, where emphasis is placed on cost and energy reduction.

PRODUCT TYPE		ALPHA® OM-550
Alloys	HRL1	
Applications	Excellent mechanical and thermal reliability Soldering temperature 50°C below SAC alloys	
Performance	Reduction in board warpage and component stress Reliability comparable to SAC305 against in-cabin performance requirements Reduction in warpage induced defects such as Non-Wet Opens and Head-in-Pillow Reduces power consumption and carbon emissions	



HIGH PERFORMANCE FLUXES

ALPHA® EF-6000

ALPHA® EF-6000 has been specifically developed to deliver high reliability and excellent soldering performance combined with outstanding board cosmetics and pin testability.

ALPHA® EF-6808HF

ALPHA® EF-6808HF is an alcohol based flux designed to optimize solderability and reliability. It is designed to have low bridging on bottom side QFPs, as well as provide superior performance in pin testing, hole-fill and solderballing.

PRODUCT TYPE	ALPHA® EF-6000	ALPHA® EF-6808HF
Properties	Low-Solids, No-Clean IPC-J-STD-004 SIR, Bellcore SIR, Bellcore ECM, JIS ECM & JIS SIR	Low solids, alcohol based Can be used in Lead-Free or SnPB processes
	IPC-J-STD-004 SIR Classification-ORL0	IPC-J-STD-004 SIR Classification-ROL0
Key Benefits	Thermally stable activator for excellent solderability Outstanding board cosmetics and pin testability	Wide process window and high throughput Excellent post-soldering cosmetics on PCB and pin testable Low bridging performance and high hole-fill
Performance	High electrical reliability & able to meet tougher SIR/EM tests Proven performance with common conformal coat chemistries	