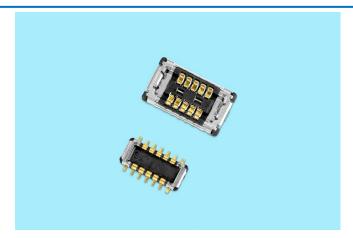


SMK Develops RF Board to Board Connector for 5G Featuring Industry's Smallest-Class Mounting Area



SMK Corporation has developed a board-to-board connector with high-frequency performance "RB-1 Series" for antenna connections.

In recent years, the number of antennas in communication devices such as smartphones has increased with the full-scale implementation of the fifth-generation (5G) mobile communication networks. The connection with conventional coaxial cable type requires multiple connectors, which makes wiring inside devices complicated. SMK's new "RB-1 Series", however, enables the connection with just a single connector, making it possible to increase the capacity and speed of data transmission, at the same time, simplify device design and improve productivity.

This product offers excellent high-frequency characteristics of up to 12GHz while being the smallest class in the industry with a pitch of 0.35 mm, stack height of 0.6 mm, and depth of 2.1 mm (common to 10, 12, and 14-pin types).

The self-alignment feature of up to ± 0.25 mm and the structure where the metal shells make contact with each other ensure workability and robustness when mating. It also offers high a retaining force as well as excellent shock and vibration resistance.

[Applications]

Smartphones, tablet PCs, laptops, Routers, antenna modules, IoT devices, etc.



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Product Name	Board to Board Connector with High-frequency I				mance	
	"RB-1 Series"					
	Part Number: CPBE7XX-0101F (Socket), CPBE8XX-0101F (Plug)					
Features	1) Low profile and compact design with a pitch of 0.35 mm,					
	stack height of 0.6 mm, and depth of 2.1 mm.					
	10, 12, 14-pin types are available.					
	2) Operating frequency range is from DC to 12GHz, providing a					
	favorable high-frequency quality, despite its small s				ize and	
	multi-pole design.					
	3) The self-alignment structure of metal shells on the plug and					
	socket allows easy mating and high robustness.					
	4) High-frequency measurements of multiple pins are availab				available	
	with a floating designed coaxial probe.					
Major	Rating	20V AC/DC, 0.5A				
Specifications	Contact Resistance	30mΩ maximum				
	Insulation Resistance	100V DC, 100MΩ minimum				
	Withstanding Voltage	100V AC (for one minute, no arc damage)				
	Operating	-55°C to +85°C				
	Temperature Range					
	Frequency Range	DC to 12GHz				
	Nominal Impedance	50Ω				
	VSWR	0-3GHz	3-6GHz	6-9GHz	9-12GHz	
		1.3 max.	1.4 max.	1.5 max.	1.6 max.	
	Mounting Method	Surface mounting				
	Packaging	Reel				



Major	Mounting Area	10Pin: 7.98 mm ²	
Specifications	External Dimensions	10Pin: 2.1 mm × 3.8 mm	
	of Socket		
	Operating Life	10 cycles	
Start Taking	Started		
Orders From			
Goes Into Mass	Started		
Production			
From			
Production	2,000,000 units per month		
Capacity			
Sample Price	100 yen per unit (Socket), 100 yen per unit (Plug)		
Inquiry	For more information, please contact CS Division		