



	Application	Cryostat/magnet	Surface layer	Dimensions [mm]	Part numbers for CPWs with SMA family connectors	Part numbers for CPWs with push-on connectors
	FMR Spin pumping, ISHE Rotation, e.g. for angular FMR <sup>5</sup> GSG bonding	Room temperature magnets Quantum Design PPMS/Versalab Quantum Design MPMS3 Montana Instruments Cryostation MicroSense - KLA VSM	Gold, no insulation Gold, 20 μm insulation Bumps	Width at sample Length to sample Max width Sample area	SMA SMA non-magnetic <sup>6</sup> 2.92 mm 2.4 mm 2.4 mm non-magnetic <sup>6</sup> 1.85 mm	SMP SMPM
CPW Standard v7	✓	✓	v7	16 19 28 12 x 12	00101 00106 00102 00104 00105 00107	
CPW Standard v8	✓	✓	v8	11.8 19 20 12 x 8.5	00101 00102 00104 00107	
CPW Standard ISHE v6	✓ ✓ ✓	✓	v6	20.6 19 30 14 x 11	00201 00206 00202 00204 00205 00207	
CPW Standard ISHE v8	✓ ✓ ✓	✓	v8 ✓ <sup>1</sup>	11.8 19 20 9 x 8.5	00201 00202 00204 00207	
CPW narrow v8	✓	✓	v8	9 43 9 15 x 5.5	02301 02302 02304 02307	
CPW narrow ISHE v7	✓ ✓ ✓	✓	v7 ✓ <sup>1</sup>	13 25 13 12 x 12	02101 02106 02102 02104 02105 02107	
CPW narrow ISHE v8	✓ ✓ ✓	✓	v8 ✓ <sup>1</sup>	9 43 9 13 x 5.5	02101 02102 02104 02107	
CPW large magnet v6	✓	✓	v6	16.6 43 29 15 x 12	00801 00806 00802 00804 00805 00807	
CPW large magnet v8	✓	✓	v8	11.8 43 20 15 x 8.5	00801 00802 00804 00807	
CPW large magnet ISHE v8	✓ ✓ ✓	✓	v8 ✓ <sup>1</sup>	11.8 43 20 9 x 8.5	02201 02202 02204 02207	
CPW PPMS IP	✓	✓ <sup>2</sup>	v6 v8	12.9 12 x 9		00301 <sup>4</sup>
CPW PPMS OOP	✓	✓ <sup>2</sup>	v6 v8	15.3 11 x 7		00401 <sup>4</sup>
CPW PPMS IP ISHE	✓ ✓	✓	v8 ✓ <sup>1</sup>	12.9 12 x 9		01001 <sup>4</sup>
CPW PPMS rotation	✓	✓	v6	15.3 4 x 5		01701 <sup>4</sup>
CPW PPMS STO	✓	✓	v6	15.3 6 x 7		01801 <sup>4</sup>
CPW MPMS IP	✓	✓ <sup>2</sup>	v8	8 6 x 6		01201 <sup>4</sup>
CPW MPMS OOP	✓	✓ <sup>2</sup>	v8	8 4 x 2		01301 <sup>4</sup>
CPW MI	✓ (✓) <sup>3</sup>	(✓) <sup>3</sup> ✓	v5	10.5 15 17.4 14 x 7		00501
CPW MI ISHE	✓ ✓ (✓) <sup>3</sup>	(✓) <sup>3</sup> ✓	v7 ✓ <sup>1</sup>	10.5 15 17.4 13 x 7		00701
CPW MI STO	(✓) <sup>3</sup> ✓	(✓) <sup>3</sup> ✓	v6	10.5 14.6 17.4 10 x 10		01901
CPW MI external magnet	✓ (✓) <sup>3</sup>	(✓) <sup>3</sup> ✓	v6	8.6 13.9 8.6 8 x 5		00602

<sup>1</sup> Next to the RF signal line there are contact pads with bumps raised 20 μm above the insulating layer for making electrical contact to the sample.

<sup>2</sup> Two CPWs (IP and OOP) are included with the FMR probes for the PPMS/Versalab and the MPMS3

<sup>3</sup> Primarily for the Cryostation but can be used with room temperature magnets, in which case angular analysis could be possible

<sup>4</sup> Fitted with soldered coax cables with push-on connectors to fit the FMR probes for the PPMS/Versalab and the MPMS3 respectively.

<sup>5</sup> The current PhaseFMR software does not support motorized rotation nor extraction of rotation angle dependent FMR parameters.

<sup>6</sup> Non-magnetic end launch connectors are only available for v6 and v7 CPWs. And only SMA and 2.4 mm types.

