

Controlled CTE, Cu and Ag-based Powdered Metal Composites for Microelectronics

TYPICAL PROPERTIES	UNITS	8020 PLS	8218 PLS	8515 PLS	8713 PLS	8515 MPLS	Silvar™	Silvar™-K
COMPOSITION	±2 WT. %	80W, 20Cu	82W, 18Cu	85W, 15Cu	87W, 13Cu	85Mo, 15Cu	61Alloy 36, 39Ag	72ASTM F15 28Ag
DENSITY	G / cc	15.2	15.5	16.1	16.4	10.0	8.77	8.8
SPECIFIC HEAT	kJ / Kg K	0.17	0.18	0.18	0.18	n/a	.36	n/a
THERMAL CONDUCTIVITY	W / m K @ 25° C	185	185	180	175	160	153	110
THERMAL EXPANSION	X 10 ⁻⁶ /K	8.3	7.8	7.2	6.9	6.7	6.5	7.0
ELECTRICAL CONDUCTIVITY	% IACS	32	32	31	30	23	35	18.5
YOUNG'S MODULUS	GPa	n/a	n/a	274	290	239	110	125
HARDNESS	VICKER	350	379	399	403	n/a	n/a	n/a
	Rockwell A	n/a	66.7	n/a	69.6	n/a	60 R _B	60 R _B

Typical data is believed to be accurate and reliable, but is presented without guarantee or warranty.

Cu-based materials made under US Patent 5,413,751, Silvar under 5,050,040 and 5,039,335

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