

## Heat Pipe Test Report

Manufacturer		Enertron		Test conditions				Test date	12/15/2011					
Wick structure/ Working fluid		Sintered Powder Metal/ Water		Effective area (m2)		2.83E-05		Note: ev- Evaporator of heat pipe cd- Condenser of heat pipe eb- Evaporator Block cb- Condenser Block						
Pipe specification		C110 Copper 0.3mm thickness		Heat load (W)		30								
Diameter (mm)		6		Contact length of ev/cd (mm)		50								
Length (mm)		300		Coolant Temperature		35								
Flatten thickness (mm)		n/a		At 90° the evaporator is directly below the condenser; 0° is horizontal.										
Bend angle (deg)		30/60/90/120/150/180												
Inclination Angle (°)	Bending angle (deg)	dT ev-cd (°C)	Thermal resistance ev-cd (°C/W)	Thermal conductivity ev-cd (W/m°C)	dT eb-cb (°C)	Thermal resistance eb-cb (°C/W)	Thermal Conductivity eb-cb (W/m°C)	Measured Temperature T (°C)						
								ev	cd	eb1	eb2	cb1	cb2	
0	0	9.71	0.32	27318	14.09	0.47	18830	52.66	42.95	53.18	53.63	39.13	39.50	
	30	8.37	0.28	31686	15.52	0.52	17094	51.75	43.38	54.25	53.40	38.51	38.10	
	60	7.06	0.24	37577	11.74	0.39	22592	48.28	41.22	50.66	49.90	38.65	38.42	
	90	8.18	0.27	32412	12.44	0.41	21323	48.83	40.64	51.28	50.42	38.34	38.48	
	120	9.37	0.31	28297	12.97	0.43	20444	49.06	39.68	51.60	50.70	37.86	38.49	
	150	8.50	0.28	31209	11.19	0.37	23713	47.97	39.47	50.06	49.16	38.37	38.48	
	180	9.77	0.33	27153	12.20	0.41	21742	48.96	39.19	51.02	50.26	38.23	38.65	

