

SEMI E19.1-0697 (Reapproved 0702) PORT STANDARD FOR MECHANICAL INTERFACE OF WAFER CASSETTE TRANSFER, 100 mm (4 inch) PORT

This standard was technically approved by the Global Physical Interfaces & Carriers Committee and is the direct responsibility of the North American Physical Interfaces & Carriers Committee. Current edition approved by the North American Regional Standards Committee on March 17, 2002. Initially available at www.semi.org June 2002, to be published July 2002. Originally published in 1991; previously published June 1997.

The complete specification for this interface includes all general requirements of SEMI E19.

Table 1 Port Dimensions for 100 mm (4 in.) Wafer Cassette

Port Door	A1	73.02 mm $\pm$ 0.13 mm	(2.875 in. $\pm$ 0.005 in.)
	A2	73.02 mm $\pm$ 0.13 mm	(2.875 in. $\pm$ 0.005 in.)
	A3	9.53 mm $\pm$ 0.25 mm	(0.375 in. $\pm$ 0.010 in.)
Guide Rails	B1	90.17 mm $\pm$ 0.13 mm	(3.550 in. $\pm$ 0.005 in.)
	B2	82.55 mm $\pm$ 0.13 mm	(3.250 in. $\pm$ 0.005 in.)
	B3	6.35 mm $\pm$ 0.25 mm	(0.250 in. $\pm$ 0.010 in.)
	B4	6.35 mm $\pm$ 0.25 mm	(0.250 in. $\pm$ 0.010 in.)
	B5	17.78 mm (0.700 in.)	maximum
	B6	12.70 mm (0.500 in.)	minimum
	B7		
	B8	3.18 mm $\pm$ 0.25 mm	minimum
	B9	6.35 mm (0.250 in.)	maximum radius
Latch Pins	C1	81.25 mm $\pm$ 0.13 mm	(3.200 in. $\pm$ 0.005 in.)
	C2	6.35 mm $\pm$ 0.13 mm	(0.250 in. $\pm$ 0.005 in.)
	C3		
	C4		
	C5	3.18 mm $\pm$ 0.05 mm	(0.125 in. $\pm$ 0.002 in.)
	C6	6.35 mm $\pm$ 0.25 mm	(0.250 in. $\pm$ 0.010 in.)
	C7	Full spherical radius	
	C8	4.44 mm (0.175 in.)	minimum
Registration Pins	D1	101.60 mm $\pm$ 0.13 mm	(4.000 in. $\pm$ 0.005 in.)
	D2	50.80 mm $\pm$ 0.13 mm	(2.000 in. $\pm$ 0.005 in.)
	D3	114.30 mm $\pm$ 0.13 mm	(4.500 in. $\pm$ 0.005 in.)
	D4	57.15 mm $\pm$ 0.13 mm	(2.250 in. $\pm$ 0.005 in.)
	D5	6.35 mm $\pm$ 0.08 mm	(0.250 in. $\pm$ 0.003 in.)
	D6	10.16 mm $\pm$ 0.25 mm	(0.400 in. $\pm$ 0.010 in.)
	D7	Full spherical radius	
Latch Pin Force each	F1	1.36 kg (3 lb)	minimum
	F2	1.36 kg (3 lb)	minimum
Position of Cassette	G1	12.70 mm $\pm$ 0.25 mm	(0.500 in. $\pm$ 0.010 in.)
	G2	0.50 mm (0.020 in.)	maximum

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