

MTBF Reliability Report

SQFlash 710 MiniPCle

Reliability Prediction	
Operating Temperature	30°C
Failure Rate (FIT)	409.686377
MTBF (hrs)	2,440,892 hrs

Product Information

Model: SQF-CMS 710

Prediction Method

Analysis Software: [Relex7.3](#)

Analysis Method: [Telcordia SR-332, Reliability Prediction of Electronic Equipment.](#)

Parts Coverage

Product	Advantech PN
SQF PCIe/NVMe Full-size MiniPCIe 710 64G BiCS3 3D NAND (0~70°C)	SQF-CMSV1-64G-E8C
SQF PCIe/NVMe Full-size MiniPCIe 710 128G BiCS3 3D NAND (0~70°C)	SQF-CMSV2-128G-E8C
SQF PCIe/NVMe Full-size MiniPCIe 710 256G BiCS3 3D NAND (0~70°C)	SQF-CMSV4-256G-E8C
SQF PCIe/NVMe Full-size MiniPCIe 710 512G BiCS3 3D NAND (0~70°C)	SQF-CMSV4-512G-E8C
SQF PCIe/NVMe Full-size MiniPCIe 710 1T BiCS3 3D NAND (0~70°C)	SQF-CMSV4-1T-E8C
SQF PCIe/NVMe Full-size MiniPCIe 710 64G BiCS3 3D NAND (-40~85°C)	SQF-CMSV1-64G-E8E
SQF PCIe/NVMe Full-size MiniPCIe 710 128G BiCS3 3D NAND (-40~85°C)	SQF-CMSV2-128G-E8E
SQF PCIe/NVMe Full-size MiniPCIe 710 256G BiCS3 3D NAND (-40~85°C)	SQF-CMSV4-256G-E8E
SQF PCIe/NVMe Full-size MiniPCIe 710 512G BiCS3 3D NAND (-40~85°C)	SQF-CMSV4-512G-E8E
SQF PCIe/NVMe Full-size MiniPCIe 710 1T BiCS3 3D NAND (-40~85°C)	SQF-CMSV4-1T-E8E

Part Number	Reference Des Date	Environment	Temperature	Description
SQF-CMSV4-1T-E8C	Jul., 28, 2018	GB, GC-Ground Benign, Controlled	30.00 °C	Top-level assembly
	Time	Failure Rate	MTBF	
	1:06 PM	409.686377	2,440,892 hrs	

Assembly Name	Part Number	Ref Des	Qty	Failure Rate	MTBF
SQF-CMSV4-1T-E8C	SQF-CMSV4-1T-E8C		1.00	409.686377	2,440,892
			1.00	409.686377	2,440,892
Part Number	Category	Ref Des	Failure Rate, Unit	Quantity	Failure Rate
00-00S0000045	Resistor		0.500000	3.00	1.500000
00-00S0000089	Resistor		0.500000	1.00	0.500000
00-00S0000173	Resistor		0.500000	9.00	4.500000
00-00S0000184	Resistor		0.500000	3.00	1.500000
00-00S0000192	Resistor		0.500000	1.00	0.500000
00-00S0000194	Resistor		0.500000	2.00	1.000000
00-00S0000195	Resistor		0.500000	2.00	1.000000
00-00S0000221	Resistor		0.500000	1.00	0.500000
00-00S0000283	Resistor		0.500000	1.00	0.500000
00-10S0000007	Capacitor		1.000000	1.00	1.000000
00-10S0000061	Capacitor		1.000000	1.00	1.000000
00-10S0000062	Capacitor		1.000000	3.00	3.000000
00-10S0000066	Capacitor		1.000000	1.00	1.000000
00-10S0000082	Capacitor		1.000000	8.00	8.000000
00-10S0000089	Capacitor		1.000000	6.00	6.000000
00-10S0000095	Capacitor		1.000000	30.00	30.000000
00-10S0000101	Capacitor		1.000000	8.00	8.000000
00-10S0000111	Capacitor		1.000000	6.00	6.000000
00-10S0000112	Capacitor		1.000000	10.00	10.000000
00-10S0000121	Capacitor		1.000000	2.00	2.000000
00-20S0000021	Inductor		0.500000	2.00	1.000000
00-30S0000073	Inductor		0.500000	2.00	1.000000
00-30S0000074	Inductor		0.500000	2.00	1.000000
00-40S0000038	Semiconductor		6.000000	1.00	6.000000
01-00S0000065	Miscellaneous		25.000000	1.00	25.000000
02-R0S0000001	Semiconductor		6.000000	2.00	12.000000
04-05S0000037	Connection		10.000000	1.00	10.000000
06-00S0000121	Integrated Circuit		84.379324	1.00	84.379324
06-04S0000011	Integrated Circuit		21.789271	1.00	21.789271
07-00S0001052	Integrated Circuit		84.379324	1.00	84.379324
19-0000000033	Other		0.000000	1.00	0.000000
40-0100000000	Integrated Circuit		67.638458	1.00	67.638458
40-0100001010	Connection		8.000000	1.00	8.000000