

MTBF Reliability Report
SQFlash 840 M.2 2280

Reliability Prediction	
Operating Temperature	30℃
Failure Rate (FIT)	480.683407
MTBF (hrs)	2,080,371hr

Product Information
Model: SQF-SM8 840

Prediction Method
Analysis Software: [Relex7.3](#)
Analysis Method: [Telcordia SR-332, Reliability Prediction of Electronic Equipment.](#)

Parts Coverage

Product	Advantech PN
SQF M.2 2280 840 240G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-240G-SCC
SQF M.2 2280 840 480G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-480G-SCC
SQF M.2 2280 840 960G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-960G-SCC
SQF M.2 2280 840 1920G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-1K9G-SCC
SQF M.2 2280 840 240G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-240G-SCE
SQF M.2 2280 840 480G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-480G-SCE
SQF M.2 2280 840 960G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-960G-SCE
SQF M.2 2280 840 1920G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-1K9G-SCE
SQF M.2 2280 840 (OPAL) 240G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-240GASCC
SQF M.2 2280 840 (OPAL) 480G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-480GASCC
SQF M.2 2280 840 (OPAL) 960G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-960GASCC
SQF M.2 2280 840 (OPAL) 1920G 3D TLC (BiCS3) (0~70°C)	SQF-SM8V4-1K9GASCC
SQF M.2 2280 840 (OPAL) 240G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-240GASCE
SQF M.2 2280 840 (OPAL) 480G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-480GASCE
SQF M.2 2280 840 (OPAL) 960G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-960GASCE
SQF M.2 2280 840 (OPAL) 1920G 3D TLC (BiCS3) (-40~85°C)	SQF-SM8V4-1K9GASCE

Part Number	Reference Des Date	Environment	Temperature	Description
SQF-SM8V4-1K9G-SCC	May, 13, 2019	GB, GC-Ground Benign, Controlled	30.00 °C	BGA-level assembly
	Time	Failure Rate	MTBF	
	10:14 AM	480.683407	2,080,371 hrs	

Assembly Name	Part Number	Ref Des	Qty	Failure Rate	MTBF
SQF-SM8V4-1K9G-SCC	SQF-SM8V4-1K9G-SCC		1.00	480.683407	2,080,371
			1.00	480.683407	2,080,371
Part Number	Category	Ref Des	Failure Rate, Unit	Quantity	Failure Rate
00-00S0000045	Resistor		0.500000	1.00	0.500000
00-00S0000060	Resistor		0.500000	1.00	0.500000
00-00S0000173	Resistor		0.500000	7.00	3.500000
00-00S0000184	Resistor		0.500000	3.00	1.500000
00-00S0000192	Resistor		0.500000	1.00	0.500000
00-00S0000194	Resistor		0.500000	5.00	2.500000
00-00S0000197	Resistor		0.500000	3.00	1.500000
00-00S0000198	Resistor		0.500000	1.00	0.500000
00-00S0000216	Resistor		0.500000	2.00	1.000000
00-00S0000221	Resistor		0.500000	1.00	0.500000
00-00S0000225	Resistor		0.500000	2.00	1.000000
00-00S0000229	Resistor		0.500000	1.00	0.500000
00-00S0000283	Resistor		0.500000	1.00	0.500000
00-10S0000062	Capacitor		1.000000	1.00	1.000000
00-10S0000062	Capacitor		1.000000	7.00	7.000000
00-10S0000066	Capacitor		1.000000	1.00	1.000000
00-10S0000082	Capacitor		1.000000	12.00	12.000000
00-10S0000089	Capacitor		1.000000	11.00	11.000000
00-10S0000095	Capacitor		1.000000	43.00	43.000000
00-10S0000111	Capacitor		1.000000	11.00	11.000000
00-10S0000112	Capacitor		1.000000	8.00	8.000000
00-10S0000121	Capacitor		1.000000	2.00	2.000000
00-20S0000021	Inductor		0.500000	2.00	1.000000
00-30S0000084	Inductor		0.500000	4.00	2.000000
00-30S0000085	Inductor		0.500000	2.00	1.000000
00-40S0000041	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
06-00S0000138	Integrated Circuit		32.429999	1.00	32.429999
06-04S0000011	Integrated Circuit		21.789271	2.00	43.578542
07-00S0002004	Integrated Circuit		84.379324	1.00	84.379324
22-3112BB1275	Integrated Circuit		67.638458	1.00	67.638458
30-T0UAORP011	Integrated Circuit		21.789271	4.00	87.157084
40-0100001177	Connection		8.000000	1.00	8.000000