

MTBF Reliability Report

SQFlash 830 mSATA SSD

Reliability Prediction	
Operating Temperature	30℃
Failure Rate (FIT)	480.475648
MTBF (hrs)	2,081,270 hrs

Product Information
Model: SQF-SMS 830

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

Parts Coverage

Product	Advantech PN
SQF mSATA 830 64G SLC (0~70°C)	SQF-SMSS4-64G-SAC
SQF mSATA 830 128G SLC (0~70°C)	SQF-SMSS4-128G-SAC
SQF mSATA 830 64G UMLC (0~70°C)	SQF-SMSU4-64G-SAC
SQF mSATA 830 128G UMLC (0~70°C)	SQF-SMSU4-128G-SAC
SQF mSATA 830 256G UMLC (0~70°C)	SQF-SMSU4-256G-SAC
SQF mSATA 830 512G UMLC (0~70°C)	SQF-SMSU8-512G-SAC
SQF mSATA 830 64G MLC (0~70°C)	SQF-SMSM4-64G-SAC
SQF mSATA 830 128G MLC (0~70°C)	SQF-SMSM4-128G-SAC
SQF mSATA 830 256G MLC (0~70°C)	SQF-SMSM4-256G-SAC
SQF mSATA 830 512G MLC (0~70°C)	SQF-SMSM4-512G-SAC
SQF mSATA 830 1T MLC (0~70°C)	SQF-SMSM8-1T-SAC

Part Number	Reference Des Date	Environment	Temperature	Description
SQF-SMSM4-512G-SAC	Mar. 30, 2017	GB, GC-Ground Benign, Controlled	30.00 °C	Top-level assembly
	Time	Failure Rate	MTBF	
	01:13 AM	480.475648	2,081,270 hrs	

Assembly Name	Part Number	Ref Des	Qty	Failure Rate	MTBF
SQF-SMSM4-512G-SAC	SQF-SMSM4-512G-SAC		1.00	480.475648	2,081,270
			1.00	480.475648	2,081,270
Part Number	Category	Ref Des	Failure Rate, Unit	Quantity	Failure Rate
06-00S0000130	Integrated Circuit		0.500000	3.00	1.500000
06-00S0000155	Integrated Circuit		0.500000	1.00	0.500000
18-A011000044	Connection		0.500000	1.00	0.500000
06-03S0000084	Integrated Circuit		0.500000	7.00	3.500000
06-04S0000011	Integrated Circuit		0.500000	1.00	0.500000
22-3110DC1123	Integrated Circuit		0.500000	3.00	1.500000
00-40S0000027	Semiconductor		0.500000	2.00	1.000000
01-00S0000049	Miscellaneous		0.500000	3.00	1.500000
00-00S0000000	Resistor		0.500000	1.00	0.500000
00-00S0000029	Resistor		0.500000	4.00	2.000000
00-00S0000089	Resistor		1.000000	11.00	11.000000
00-00S0000173	Resistor		1.000000	4.00	4.000000
00-00S0000174	Resistor		1.000000	10.00	10.000000
00-00S0000184	Resistor		1.000000	16.00	16.000000
00-00S0000195	Resistor		1.000000	1.00	1.000000
00-00S0000197	Resistor		1.000000	1.00	1.000000
00-00S0000221	Resistor		1.000000	15.00	15.000000
00-00S0000222	Resistor		1.000000	7.00	7.000000
00-10S0000000	Capacitor		1.000000	2.00	2.000000
00-10S0000011	Capacitor		1.000000	66.00	66.000000
00-10S0000054	Capacitor		1.000000	8.00	8.000000
00-10S0000056	Capacitor		1.000000	2.00	2.000000
00-10S0000058	Capacitor		1.000000	1.00	1.000000
00-10S0000061	Capacitor		0.500000	3.00	1.500000
00-10S0000062	Capacitor		0.500000	1.00	0.500000
00-10S0000066	Capacitor		0.500000	5.00	2.500000
00-10S0000067	Capacitor		6.000000	1.00	6.000000
00-10S0000082	Capacitor		25.000000	1.00	25.000000
00-10S0000089	Capacitor		84.379324	1.00	84.379324
00-10S0000108	Capacitor		84.379324	1.00	84.379324
00-10S0000111	Capacitor		21.789271	1.00	21.789271
00-20S0000005	Inductor		21.789271	1.00	21.789271
00-20S0000020	Inductor		67.638458	1.00	67.638458
00-30S0000045	Inductor		8.000000	1.00	8.000000