

MTBF Reliability Report

SQFlash 630 2.5” SATA SSD

Reliability Prediction	
Operating Temperature	30C
Failure Rate (FIT)	504.242644
MTBF (hrs)	2,001,029 hrs

Product Information

Model: SQF-S25 630

Prediction Method

Analysis Software: [Relex7.3](#)

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

Parts Coverage

SLC

Product	Advantech PN
SQF 2.5" SSD 630 1G SLC (0~70°C)	SQF-S25S1-1G-S9C
SQF 2.5" SSD 630 2G SLC (0~70°C)	SQF-S25S2-2G-S9C
SQF 2.5" SSD 630 4G SLC (0~70°C)	SQF-S25S4-4G-S9C
SQF 2.5" SSD 630 8G SLC (0~70°C)	SQF-S25S2-8G-S9C
SQF 2.5" SSD 630 16G SLC (0~70°C)	SQF-S25S4-16G-S9C
SQF 2.5" SSD 630 32G SLC (0~70°C)	SQF-S25S4-32G-S9C
SQF 2.5" SSD 630 64G SLC (0~70°C)	SQF-S25S4-64G-S9C
SQF 2.5" SSD 630 1G SLC (-40~85°C)	SQF-S25S1-1G-S9E
SQF 2.5" SSD 630 2G SLC (-40~85°C)	SQF-S25S2-2G-S9E
SQF 2.5" SSD 630 4G SLC (-40~85°C)	SQF-S25S4-4G-S9E
SQF 2.5" SSD 630 8G SLC (-40~85°C)	SQF-S25S2-8G-S9E
SQF 2.5" SSD 630 16G SLC (-40~85°C)	SQF-S25S4-16G-S9E
SQF 2.5" SSD 630 32G SLC (-40~85°C)	SQF-S25S4-32G-S9E
SQF 2.5" SSD 630 64G SLC (-40~85°C)	SQF-S25S4-64G-S9E

Ultra MLC

Product	Advantech PN
SQF 2.5" SSD 630 2G UMLC (0~70°C)	SQF-S25U1-2G-S9C
SQF 2.5" SSD 630 4G UMLC (0~70°C)	SQF-S25U2-4G-S9C
SQF 2.5" SSD 630 8G UMLC (0~70°C)	SQF-S25U4-8G-S9C
SQF 2.5" SSD 630 16G UMLC (0~70°C)	SQF-S25U4-16G-S9C
SQF 2.5" SSD 630 32G UMLC (0~70°C)	SQF-S25U4-32G-S9C
SQF 2.5" SSD 630 64G UMLC (0~70°C)	SQF-S25U4-64G-S9C
SQF 2.5" SSD 630 128G UMLC (0~70°C)	SQF-S25U4-128G-S9C
SQF 2.5" SSD 630 2G UMLC (-40~85°C)	SQF-S25U1-2G-S9E
SQF 2.5" SSD 630 4G UMLC (-40~85°C)	SQF-S25U2-4G-S9E
SQF 2.5" SSD 630 8G UMLC (-40~85°C)	SQF-S25U4-8G-S9E
SQF 2.5" SSD 630 16G UMLC (-40~85°C)	SQF-S25U4-16G-S9E
SQF 2.5" SSD 630 32G UMLC (-40~85°C)	SQF-S25U4-32G-S9E
SQF 2.5" SSD 630 64G UMLC (-40~85°C)	SQF-S25U4-64G-S9E
SQF 2.5" SSD 630 128G UMLC (-40~85°C)	SQF-S25U4-128G-S9E

MLC

Product	Advantech PN
SQF 2.5" SSD 630 4G MLC (0~70°C)	SQF-S25M1-4G-S9C
SQF 2.5" SSD 630 8G MLC (0~70°C)	SQF-S25M2-8G-S9C
SQF 2.5" SSD 630 16G MLC (0~70°C)	SQF-S25M4-16G-S9C
SQF 2.5" SSD 630 32G MLC (0~70°C)	SQF-S25M4-32G-S9C
SQF 2.5" SSD 630 64G MLC (0~70°C)	SQF-S25M4-64G-S9C
SQF 2.5" SSD 630 128G MLC (0~70°C)	SQF-S25M4-128G-S9C
SQF 2.5" SSD 630 256G MLC (0~70°C)	SQF-S25M4-256G-S9C
SQF 2.5" SSD 630 4G MLC (-40~85°C)	SQF-S25M1-4G-S9E
SQF 2.5" SSD 630 8G MLC (-40~85°C)	SQF-S25M2-8G-S9E
SQF 2.5" SSD 630 16G MLC (-40~85°C)	SQF-S25M4-16G-S9E
SQF 2.5" SSD 630 32G MLC (-40~85°C)	SQF-S25M4-32G-S9E
SQF 2.5" SSD 630 64G MLC (-40~85°C)	SQF-S25M4-64G-S9E
SQF 2.5" SSD 630 128G MLC (-40~85°C)	SQF-S25M4-128G-S9E
SQF 2.5" SSD 630 256G MLC (-40~85°C)	SQF-S25M4-256G-S9E

Part Number	Reference Des Date	Environment	Temperature	Description
SQF-S25M4-256G-S9C	March, 09, 2016	GB, GC-Ground Benign, Controlled	30.00 °C	Top-level assembly
	Time	Failure Rate	MTBF	
	6:03 PM	504.242644	2,001,029	

Assembly Name	Part Number	Ref Des	Qty	Failure Rate	MTBF
SQF-S25M4-256G-S9C	SQF-S25M4-256G-S9C		1.00	499.742644	2,001,029
			1.00	499.742644	2,001,029
Part Number	Category	Ref Des	Failure Rate, Unit	Quantity	Failure Rate
30-T0JA02P112	Integrated Circuit		21.789271	4.00	87.157084
22-09S9BB10JL	Integrated Circuit		82.942156	1.00	82.942156
00-00S0000000	Resistor		0.500000	23.00	11.500000
00-00S0000013	Resistor		0.500000	1.00	0.500000
00-00S0000045	Resistor		0.500000	4.00	2.000000
00-00S0000059	Resistor		0.500000	4.00	2.000000
00-00S0000064	Resistor		0.500000	1.00	0.500000
00-00S0000066	Resistor		0.500000	1.00	0.500000
00-00S0000076	Resistor		0.500000	1.00	0.500000
00-00S0000089	Resistor		0.500000	2.00	1.000000
00-00S0000092	Resistor		0.500000	1.00	0.500000
00-00S0000188	Resistor		0.500000	2.00	1.000000
00-00S0000010	Resistor		0.500000	1.00	0.500000
00-10S0000000	Capacitor		1.000000	1.00	1.000000
00-10S0000006	Capacitor		1.000000	17.00	17.000000
00-10S0000037	Capacitor		1.000000	13.00	13.000000
00-10S0000049	Capacitor		1.000000	3.00	3.000000
00-10S0000050	Capacitor		1.000000	1.00	1.000000
00-10S0000054	Capacitor		1.000000	1.00	1.000000
00-10S0000056	Capacitor		1.000000	3.00	3.000000
00-10S0000061	Capacitor		1.000000	2.00	2.000000
00-10S0000062	Capacitor		1.000000	1.00	1.000000
00-10S0000063	Capacitor		1.000000	2.00	2.000000
00-10S0000066	Capacitor		1.000000	48.00	48.000000
00-10S0000067	Capacitor		1.000000	6.00	6.000000
00-20S0000005	Inductor		0.416183	2.00	0.832366
00-30S0000034	Inductor		0.416183	3.00	1.248548
00-40S0000027	Semiconductor		4.584359	1.00	4.584359
00-50S0000008	Miscellaneous		0.500000	1.00	0.500000
01-00S0000059	Miscellaneous		25.000000	1.00	25.000000
02-R0S0000001	Semiconductor		25.484953	2.00	50.969906
04-01S0000017	Connection		0.000000	1.00	0.000000
06-00S0000090	Integrated Circuit		42.534577	3.00	127.603730
18- A023000011	Connection		4.904495	1.00	4.904495