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Reliability Test Report

Part No.	RAK476-B
Model Name	WLAN (802.11) Module
Report No.	CZLLS006105-2016

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Reliability Prediction Summary

File Name: RAK476-B
System: RAK476-B

Failure Rate: 78.2044 FITs
MTBF (hrs): 12787009.2170
Temperature (C): 25°C

[illegible]

Reliability Prediction
Summary

File Name: RAK476-B
System: RAK476-B

Failure Rate: 78.2044 FITs
MTBF (hrs): 12787009.2170
Temperature (C):25°C

Part Number	Description	Category	Unit Failure Rate	Quantity	Total Failure Rate
chicapacitor	50V 1.2pF±0.1pF COG (0201)	Capacitor	0.364375	2	0.72875
chicapacitor	50V 12pF ±5% COG (0201)	Capacitor	0.364375	2	0.72875
chicapacitor	10V 100nF±10% X5R (0201)	Capacitor	0.364375	15	5.465625
chicapacitor	6.3V 1.0uF±20% X5R (0201)	Capacitor	0.364375	3	1.093125
chicapacitor	6.3V 4.7uF±20% X5R (1608)	Capacitor	0.364375	1	0.364375
chicapacitor	6.3V 10uF±20% X5R (1608)	Capacitor	0.364375	1	0.364375
chicapacitor	0.05W 0Ω+50mΩ (0201)	Capacitor	0.364375	4	1.4575
chicapacitor	0.063W 0Ω+50mΩ (1005)	Resistor	0.374759	2	0.749518
pellet resistance	0.05W 4.7kΩ±5% (0201)	Resistor	0.374759	1	0.374759
pellet resistance	0.05W 10kΩ±5% (0201)	Resistor	0.241889	2	0.483778
pellet resistance	0.05W 100kΩ±5% (0201)	Resistor	0.374759	1	0.374759
Power inductor	2.2UH±20%, 2016	Inductor	0.332597	1	0.332597
multilayer chip inductor	2.7nH±0.1nH , 0201	Inductor	0.332597	1	0.332597
multilayer chip inductor	27nH±0.3 nH , 0201	Inductor	0.332597	1	0.332597
IC	WIFI SOC	Integrated Circuit	11.557328	1	11.557328
ESD	ES0402V014CT	Miscellaneous	29.187865	1	29.187865
SMD Crystal	40MHz, 3225, CL:15PF/±10PPM	Miscellaneous	6.069018	1	6.069018
IPEX connector	C88P132-01002AH	Optical Device	8.3449	1	8.3449
PCB (4-Layer)	119.1x62.5mm/12 1.0mm	Connection	9.862154	1	9.862154

Reliability Prediction

Summary

File Name: RAK476-B
System: RAK476-B

Failure Rate: 517.197 FITs
MTBF (hrs): 1933497.7733
Temperature (C): 80°C

[illegible]

Reliability Prediction
Summary

File Name: RAK476-B

System: RAK476-B

Failure Rate: 517.197 FITs

MTBF (hrs): 1933497.773

Temperature (C):80℃

Part Number	Description	Category	Unit Failure Rate	Quantity	Total Failure Rate
chicapacitor	50V 1.2pF±0.1pF COG (0201)	Capacitor	0.493467	2	0.986934
chicapacitor	50V 12pF ±5% COG (0201)	Capacitor	0.493467	2	0.986934
chicapacitor	10V 100nF±10% X5R (0201)	Capacitor	0.493467	15	7.402005
chicapacitor	6.3V 1.0uF±20% X5R (0201)	Capacitor	0.493467	3	1.480401
chicapacitor	6.3V 4.7uF±20% X5R (1608)	Capacitor	0.493467	1	0.493467
chicapacitor	6.3V 10uF±20% X5R (1608)	Capacitor	0.493467	1	0.493467
chicapacitor	0.05W 0Ω +50mΩ (0201)	Capacitor	0.493467	4	1.973868
chicapacitor	0.063W 0Ω +50mΩ (1005)	Resistor	3.131284	2	6.262568
pellet resistance	0.05W 4.7kΩ ±5% (0201)	Resistor	3.131284	1	3.131284
pellet resistance	0.05W 10kΩ ±5% (0201)	Resistor	3.131284	2	6.262568
pellet resistance	0.05W 100kΩ ±5% (0201)	Resistor	3.131284	1	3.131284
Power inductor	2.2UH±20%, 2016	Inductor	0.82613	1	0.82613
multilayer chip inductor	2.7nH±0.1nH , 0201	Inductor	0.82613	1	0.82613
multilayer chip inductor	27nH±0.3 nH , 0201	Inductor	0.82613	1	0.82613
IC	WIFI SOC	Integrated Circuit	96.566723	1	96.566723
ESD	ES0402V014CT	Miscellaneous	110.847616	1	110.847616
SMD Crystal	40MHz, 3225, CL:15PF/±10PPM	Optical Device	68.67497	1	68.67497
IPEX connector	C88P132-01002AH	Inductor	94.428084	1	94.428084
PCB (4-Layer)	119.1x62.5mm/12 1.0mm	Connection	111.596826	1	111.596826