

LTR	REVISION	DATE	APPD
-	RELEASED	12-08-03	

MTBF / LIFE TEST DATA

NO.	INITIAL TEST				FINAL TEST						JUDGEMENT		
	VF	VR	IV	Visual	Full Force Resistance Ability	Solder Ability	VF	VR	IV	Visual	Degradation rate	ACC	REJ
1	2.15		12.45				2.13		11.68		-6.18%	✓	
2	2.21		15.62				2.19		14.95		-4.29%	✓	
3	2.32		13.85				2.31		12.79		-7.65%	✓	
4	2.08		11.86				2.07		10.68		-9.95%	✓	
5	2.11		10.52				2.10		9.64		-8.37%	✓	
6	2.16		8.46				2.14		8.14		-3.78%	✓	
7	2.19		7.62				2.17		7.41		-2.76%	✓	
8	2.21		6.64				2.20		6.45		-2.86%	✓	
9	2.15		5.69				2.14		5.49		-3.51%	✓	
10	2.24		6.25				2.22		6.11		-2.24%	✓	
11	2.22		10.62				2.21		9.86		-7.16%	✓	
12	2.18		9.84				2.16		9.67		-1.73%	✓	
13	2.16		8.84				2.15		8.76		-0.90%	✓	
14	2.15		10.31				2.14		10.11		-1.94%	✓	
15	2.21		8.64				2.20		8.14		-5.79%	✓	

TEST CONDITION:
IF=20mA 1000hrs Ta=25°C±5°C


MTTF & FAILURE RATE

NUMBER OF FAILURE r	CONFIDENCE LEVEL Pa			
	50%	60%	90%	95%
0	0.6	0.93	2.31	2.96
1	1.68	2.0	3.89	4.67
2	2.67	3.08	5.3	6.21
3	3.67	4.17	5.7	7.69
4	4.67	5.24	8.0	9.09
5	5.67	6.25	9.25	10.42
6	6.67	7.27	10.55	11.76
7	7.67	8.33	11.75	13.16
8	8.67	9.35	13.0	14.3
9	9.67	10.42	14.2	15.63
10	10.67	11.42	15.4	16.95

SAMPLE SIZE: 240PCS
TEST HOURS: 1000HRS
OPERATION LIFE TEST CONDITION: If=20mA
TOTAL FAILURE: 0PCS

$$MTTF = \frac{n \cdot t}{X^2 / Z(0;50\%)} = \frac{240 \cdot 1000}{0.6} \text{ hours} = 400,000 \text{ hours}$$

= 1 / MTTF = 0.25% PER 1000hours

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	DWG NO DSTR0067-A		SCALE NTS		SHEET 1 OF 1	DATE 12-08-03
	CODE IDENT NO. 8Z410	DWG BY RM	CHK BY PL 12-09-03	QA	MFG	CUSTOMER