

6/25/2020



**RELIABILITY MONITOR REPORT
FOR**

TJT S18

MAXIM INTEGRATED

**160 RIO ROBLES
SAN JOSE, CA 95134**

**This Report was prepared by
MAXIM INTEGRATED Reliability Engineering**

Summary:

The data in the tables that follow was generated as the result of an on-going Process Reliability Monitor. The specific products in this process monitor are:

MAX14689EWL	MAX16956AUB	MAX16961RATE	MAX16961SAUE	MAX16962SATE
MAX16990ATC	MAX16992AUB	MAX20021ATIA/	MAX20030BAT	MAX20418ATG
MAX25105EQP/	MAX25205EQP/	MAX40100ANT+	MAX44284FAZT	MAX44284FAZT
MAX44284HAN	MAX44290ANT+	MAX77596ETBC	MAX77843EWV	MAX8902BATA/
MAX98726BENJ				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 85042 QUANTITY: 655 FAILS: 0 FITS: 1.3

The parameters used to calculate this failure rate are as follows:

Cf: 60% Ea: 0.7 Tu: 25 °C

The reliability data follows and in this section is the detailed reliability data by stress. The reliability data section includes the latest data available. This report covers data between 1/1/2020 and 3/31/2020 .

Process Information:

Process Description: TJT S18

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE		MAX25105EQP/V+	125°C	192 HRS	80	0	TCUN7Q001EB
HIGH TEMP OP LIFE	1851	MAX20030BATMK/V+	125°C	1000 HRS	78	0	TBSH7A028HA
HIGH TEMP OP LIFE	1907	MAX14689EWL+T	125°C	1000 HRS	80	0	TAYA9A023BC
HIGH TEMP OP LIFE	1908	MAX20021ATIA/V+	125°C	1000 HRS	80	0	TAKR5A179C
HIGH TEMP OP LIFE	1908	MAX40100ANT+TG7	125°C	96 HRS	80	0	TBHH4A068AF
HIGH TEMP OP LIFE	1909	MAX77596ETBC+TCMR	125°C	1000 HRS	80	0	TAQJ2A189A
HIGH TEMP OP LIFE	1919	MAX20418ATGB/V+	125°C	192 HRS	98	0	TCBZ3A032C
HIGH TEMP OP LIFE	1942	MAX16956AUBC/V+	125°C	1000 HRS	79	0	TAQJ2A216CX
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE		MAX25105EQP/V+	150°C	1000 HRS	80	0	TCUN7Q001FA
STORAGE LIFE		MAX25105EQP/V+	150°C	1000 HRS	80	0	TCUN7Q001EB
STORAGE LIFE	1851	MAX20030BATMK/V+	150°C	1000 HRS	80	0	TBSH7A028HA
STORAGE LIFE	1851	MAX20030BATMK/V+	150°C	1000 HRS	80	0	TBSH7A028HB
STORAGE LIFE	1851	MAX20030BATMK/V+	150°C	1000 HRS	80	0	TBSH7A028HC
STORAGE LIFE	1908	MAX40100ANT+TG7	150°C	1000 HRS	80	0	TBHH4A068AF
STORAGE LIFE	1909	MAX77596ETBC+TCMR	150°C	1000 HRS	80	0	TAQJ2A189A

STORAGE LIFE	1942	MAX16956AUBC/V+	150°C	96	HRS	80	0	TAQJ2A216CX
					Total:		0	

TEMPERATURE CYCLE

DESCRIPTION	DATE	TEST	CONDITION	READPOINT	QUANTITY	FAILS	LOT
	CODE	VEHICLE					NO.
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX25105EQP/V+	-65C TO +150C (Condition C)	1000 CYS	80	0	TCUN7Q001C
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX25105EQP/V+	-65C TO +150C (Condition C)	500 CYS	43669	0	TCUN7Q001FA
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX25105EQP/V+	-65C TO +150C (Condition C)	1000 CYS	80	0	TCUN7Q001EB
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77843EWW+T	-65C TO +150C (Condition C)	500 CYS	80	0	TATR3A4D9D
TEMP CYCLE, 15' RAMP, 15' DWELL		MAX77843EWW+T	-40C TO +125C (Condition G)	250 CYS	80	0	TATR3A4D9E
TEMP CYCLE, 5' RAMP, 10' DWELL	1820	MAX16990ATCD/VY+	-65C TO +150C (Condition C)	1000 CYS	24	0	TAYF1A023E
TEMP CYCLE, 15' RAMP, 15' DWELL	1846	MAX44284HANT+TG7	-40C TO +125C (Condition G)	100 CYS	80	0	TBEO9A107AG
TEMP CYCLE, 15' RAMP, 15' DWELL	1848	MAX44284HANT+TG7	-40C TO +125C (Condition G)	100 CYS	80	0	TBEO9A110BE
TEMP CYCLE, 5' RAMP, 10' DWELL	1851	MAX44284FAZT+	-40C TO +125C (Condition G)	850 CYS	80	0	TCAG0A131BM
TEMP CYCLE, 5' RAMP, 10' DWELL	1851	MAX20030BATMK/V+	-65C TO +150C (Condition C)	1000 CYS	80	0	TBSH7A028HA
TEMP CYCLE, 5' RAMP, 10' DWELL	1851	MAX20030BATMK/V+	-65C TO +150C (Condition C)	1000 CYS	89	0	TBSH7A028HB
TEMP CYCLE, 5' RAMP, 10' DWELL	1851	MAX20030BATMK/V+	-65C TO +150C (Condition C)	1000 CYS	89	0	TBSH7A028HC
TEMP CYCLE, 15' RAMP, 15' DWELL	1904	MAX44284FAZT+	-40C TO +125C (Condition G)	1000 CYS	80	0	TCAG0A131DM
TEMP CYCLE, 15' RAMP, 15' DWELL	1904	MAX44284FAZT+TG7	-65C TO +150C (Condition C)	1000 CYS	77	0	TCAG0A131EH
TEMP CYCLE, 15' RAMP, 15' DWELL	1904	MAX44284FAZT+TG7	-65C TO +150C (Condition C)	100 CYS	80	0	TCAG0A131DK
TEMP CYCLE, 15' RAMP, 15' DWELL	1907	MAX14689EWL+T	-65C TO +150C (Condition C)	1000 CYS	80	0	TAYA9A023BC
TEMP CYCLE, 5' RAMP, 10' DWELL	1908	MAX20021ATIA/V+	-65C TO +150C (Condition C)	1000 CYS	79	0	TAKR5A179C

TEMP CYCLE, 15' RAMP, 15' DWELL	1908	MAX40100ANT+TG7	-65C TO +150C (Condition C)	500	CYS	80	0	TBHH4A068AF
TEMP CYCLE, 5' RAMP, 10' DWELL	1909	MAX77596ETBC+TCMR	-65C TO +150C (Condition C)	1000	CYS	80	0	TAQJ2A189A
TEMP CYCLE, 15' RAMP, 15' DWELL	1920	MAX44284FAZT+TG7	-65C TO +150C (Condition C)	100	CYS	80	0	TCAG0A150AL
TEMP CYCLE, 5' RAMP, 10' DWELL	1921	MAX25205EQP/VY+	-65C TO +150C (Condition C)	1000	CYS	80	0	TCUN7Q002A
TEMP CYCLE, 5' RAMP, 10' DWELL	1921	MAX25205EQP/VY+	-65C TO +150C (Condition C)	1000	CYS	80	0	TCUN7Q003A
TEMP CYCLE, 5' RAMP, 10' DWELL	1923	MAX8902BATA/V+T	-65C TO +150C (Condition C)	500	CYS	80	0	THTYCA432EA
TEMP CYCLE, 15' RAMP, 15' DWELL	1926	MAX77843E WV+T	-40C TO +125C (Condition G)	500	CYS	80	0	TATR3A4D9G
TEMP CYCLE, 15' RAMP, 15' DWELL	1927	MAX77843E WV+T	-40C TO +125C (Condition G)	1000	CYS	78	0	TATR3A4D9J
TEMP CYCLE, 5' RAMP, 10' DWELL	1942	MAX16956AUBC/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	TAQJ2A216CX
TEMP CYCLE, 15' RAMP, 15' DWELL	1948	MAX44290ANT+	-40C TO +125C (Condition G)	500	CYS	80	0	TBFD4Q001KM

Total: 0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE	TEST	CONDITION	READPOINT	QUANTITY	FAILS	LOT	
	CODE	VEHICLE					NO.	
BIASED MOISTURE		MAX44284FAZT+TG7	130C, 85% R.H.	264	HRS	77	0	TCAG0A131EH
BIASED MOISTURE		MAX25105EQP/V+	130C, 85% R.H.	476	HRS	80	0	TCUN7Q001FA
BIASED MOISTURE		MAX25105EQP/V+	130C, 85% R.H.	476	HRS	80	0	TCUN7Q001EB
BIASED MOISTURE		MAX77843E WV+T	130C, 85% R.H.	264	HRS	48	0	TATR3A4D9E
BIASED MOISTURE	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	16	0	TBSH7A028HC
BIASED MOISTURE	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	28	0	TBSH7A028HC
BIASED MOISTURE	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	28	0	TBSH7A028HC
BIASED MOISTURE	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	8	0	TBSH7A028HC
BIASED MOISTURE	1904	MAX44284FAZT+	130C, 85% R.H.	264	HRS	77	0	TCAG0A131DM
BIASED MOISTURE	1907	MAX14689E WL+T	130C, 85% R.H.	96	HRS	80	0	TAYA9A023BC
BIASED MOISTURE	1908	MAX20021ATIA/V+	130C, 85% R.H.	96	HRS	40	0	TAKR5A179C
BIASED MOISTURE	1908	MAX20021ATIA/V+	130C, 85% R.H.	96	HRS	40	0	TAKR5A179C
BIASED MOISTURE	1908	MAX40100ANT+TG7	130C, 85% R.H.	1000	HRS	80	0	TBHH4A068AF
BIASED MOISTURE	1909	MAX77596ETBC+TCMR	130C, 85% R.H.	96	HRS	80	0	TAQJ2A189A

BIASED MOISTURE	1921	MAX25205EQP/VY+	130C, 85% R.H.	500	HRS	80	0	TCUN7Q002A
BIASED MOISTURE	1923	MAX8902BATA/V+T	130C, 85% R.H.	96	HRS	80	0	THTYCA432EA
BIASED MOISTURE	1937	MAX44290ANT+	130C, 85% R.H.	264	HRS	80	0	TBFD4Q003EM
BIASED MOISTURE	1937	MAX44290ANT+	130C, 85% R.H.	264	HRS	80	0	TBFD4Q003EM
BIASED MOISTURE	1937	MAX44290ANT+	130C, 85% R.H.	264	HRS	80	0	TBFD4Q003EM
BIASED MOISTURE	1948	MAX44290ANT+	130C, 85% R.H.	264	HRS	80	0	TBFD4Q001KM
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK		MAX44284FAZT+	130C, 85% R.H.	96	HRS	80	0 TCAG0A131DM	
MOISTURE SOAK		MAX44284FAZT+TG7	130C, 85% R.H.	96	HRS	77	0 TCAG0A131EH	
MOISTURE SOAK		MAX25105EQP/V+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q001C	
MOISTURE SOAK		MAX25105EQP/V+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q001FA	
MOISTURE SOAK		MAX25105EQP/V+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q001EB	
MOISTURE SOAK	1832	MAX44284HANT+TG7	130C, 85% R.H.	96	HRS	80	0 TBEO9A080A	
MOISTURE SOAK	1842	MAX44284HANT+TG7	130C, 85% R.H.	96	HRS	80	0 TBEO9A106BM	
MOISTURE SOAK	1846	MAX44284HANT+TG7	130C, 85% R.H.	96	HRS	80	0 TBEO9A107AG	
MOISTURE SOAK	1848	MAX44284HANT+TG7	130C, 85% R.H.	96	HRS	80	0 TBEO9A110BE	
MOISTURE SOAK	1851	MAX44284FAZT+	130C, 85% R.H.	96	HRS	80	0 TCAG0A131BM	
MOISTURE SOAK	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	80	0 TBESH7A028HA	
MOISTURE SOAK	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	80	0 TBESH7A028HB	
MOISTURE SOAK	1851	MAX20030BATMK/V+	130C, 85% R.H.	96	HRS	80	0 TBESH7A028HC	
MOISTURE SOAK	1920	MAX44284FAZT+TG7	130C, 85% R.H.	96	HRS	80	0 TCAG0A150AL	
MOISTURE SOAK	1921	MAX25205EQP/VY+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q002A	
MOISTURE SOAK	1921	MAX25205EQP/VY+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q002A	
MOISTURE SOAK	1921	MAX25205EQP/VY+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q003A	
MOISTURE SOAK	1921	MAX25205EQP/VY+	130C, 85% R.H.	96	HRS	80	0 TCUN7Q003A	
MOISTURE SOAK	1942	MAX98726BENJ+TCNF	130C, 85% R.H.	96	HRS	80	0 TBGY1A723AE	
MOISTURE SOAK	1942	MAX16956AUBC/V+	130C, 85% R.H.	96	HRS	80	0 TAQJ2A216CX	
MOISTURE SOAK	1948	MAX44290ANT+	130C, 85% R.H.	96	HRS	80	0 TBFD4Q001KM	
Total:							0	

FAILURE RATE: MTTF (YRS): 85042 QUANTITY: 655 FAILS: 0 FITS: 1.3