



**Reliability Evaluation Plan and final results
on L7805 - LM317
2 Mils Cu on l/f with spot Ag TO220 Casablanca**

**REL-9333-178/ARSA103.01/W
26 - July - 2001**

**Line..... LX05 - L317
Package.... TO220**

L7805

Test	Conditions	S.S.	Requirement	Results
H.T.S.	TA=150 °C	77 x 1 Lot	Parameter deviation within spec. limits at 1000 hours.	No parameter deviation at 1000 hours.
T.H.B.	TA=85°C - RH=85% Vbias= 24V	77 x 1 Lot	Parameter deviation within spec. limits at 1000 hours.	No parameter deviation at 1000 hours.
H.T.B.	TA=125°C Vbias= 35V	77 x 1 Lot	Parameter deviation within spec. limits at 1000 hours.	No parameter deviation at 1000 hours.
PRESSURE POT	TA=121°C - PA=2Atm	77 x 1 Lot	Parameter deviation within spec. limits at 336 hours.	No parameter deviation at 336 hours.
THERMAL CYCLES AIR TO AIR	TA=-65°C TO 150°C 1 HOUR / CYCLE	77 x 1 Lot	Parameter deviation within spec. limits at 1000 cycles.	No parameter deviation at 1000 cy
THERMAL SHOCKS LIQUID TO LIQUID	TA=-65°C TO 150°C 10 MIN / SHOCK	77 x 1 Lot	Parameter deviation within spec. limits at 500 shocks.	No parameter deviation at 500 sh.
ENVIRONMENTAL SEQUENCE	100 THERMAL CYCLES + 168H PP	50 x 1 Lot	Parameter deviation within spec. limits at end of test.	No parameter deviation at end of test.
THERMAL FATIGUE	$\Delta T = 105^\circ\text{C}$	77 x 1 Lot	Parameter deviation within spec. limits at 10000 cycles.	No parameter deviation at 10k cycles.



LM317

Test	Conditions	S.S.	Requirement	Results
H.T.S.	TA=150 °C	77 x 1 Lot	Parameter deviation within spec. limits at 1000 hours.	No parameter deviation at 1000 hours.
T.H.B.	TA=85°C - RH=85% Vbias= 24V	77 x 1 Lot	Parameter deviation within spec. limits at 1000 hours.	No parameter deviation at 1000 hours.
H.T.B.	TA=125°C Vbias= 35V	77 x 1 Lot	Parameter deviation within spec. limits at 1000 hours.	No parameter deviation at 1000 hours.
PRESSURE POT	TA=121°C - PA=2Atm	77 x 1 Lot	Parameter deviation within spec. limits at 336 hours.	No parameter deviation at 336 hours.
THERMAL CYCLES AIR TO AIR	TA=-65°C TO 150°C 1 HOUR / CYCLE	77 x 1 Lot	Parameter deviation within spec. limits at 1000 cycles.	No parameter deviation at 1000 cy
THERMAL SHOCKS LIQUID TO LIQUID	TA=-65°C TO 150°C 10 MIN / SHOCK	77 x 1 Lot	Parameter deviation within spec. limits at 500 shocks.	No parameter deviation at 500 sh.
ENVIRONMENTAL SEQUENCE	100 THERMAL CYCLES + 168H PP	50 x 1 Lot	Parameter deviation within spec. limits at end of test.	No parameter deviation at end of test.
THERMAL FATIGUE	$\Delta T= 105^{\circ}\text{C}$	77 x 1 Lot	Parameter deviation within spec. limits at 10000 cycles.	No parameter deviation at 10k cycles.

Comments: The reliability tests results are aligned to our STD production