



EPPL COMPONENT

Originator: Philippe FELLON

Status: CLOSED

Company: UMS

Accepted: 2015-07-03

EPPL Part: 2

Group: MICROCIRCUITS Subgroup: MICROWAVE MONOLITIC
INTEGRATED CIRCUITS
Part type: (MMIC)

PPH25

Description: 0.25 µm Power P-HEMT technology

Process: 0.25µm pseudomorphic HEMT (AlGaAs/InGaAs/AlGaAs/GaAs) with double gate recess

Technology suitable for power switch/attenuator and power amplifier up to 35GHz

Detail spec: 2269010, 2269010

Package: N/A

Manufacturer: UMS

APPROVAL STATUS

Qualification: Others

Other: ESCC evaluation in accordance to 2269010 completed in December 2014

Highest screening level (MIL):

Evaluation programmes or other approvals: Space evaluation final report (NE_10S_PPH25_Space_Evaluation_report_V2)

Former space usage: Technology used by Thales Alenia Space for COSMO programme

PREVIOUS PROCUREMENT AND TEST DATA

Test data (Evaluation, Lot acceptance, DPA, MIL QCI/TCI, ...): Etude de la fiabilité sous contrainte RF de la filière PPH25 (CNES study) NE.32S.04511
Internal PPH25 re-qualification 2008 (NE_32S_04651)

RADIATION HARDNESS DATA

Total dose effects:

Displacement damage:

Single event effects (SEL/SEU/SET/SEFI/SEB/SEGR/others): SEE Radiation was tested on PPH25X-10 and the process is fully comparable to PPH25, therefore the conclusion for



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SEE is applicable to PPH25.
PPH25X-10 was tested in DC+RF up to 8dB of Gain
Compression: No evidence of sensitivity to
Heavy Ions (ESA STUDY : SEE TESTING OF EUROPEAN
GaAs
TECHNOLOGIES Contract No. 4000102424/11/NL/CP)

REMARKS