



EPPL COMPONENT

Originator: Takashi Tamura

Status: CLOSED

Company: UMS

Accepted: 2012-06-26

EPPL Part: 2

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

HB20PX-10

Description: HBT InGaP (2 μm emitter width)
Applications in Power Amplifiers up to Ku Band
Absolute Maximum Ratings (AMR) for HB20PX-10:
- Base to Collector Voltage : $V_{bc} = 11.0\text{V}$
- Collector to Emitter Voltage: $V_{ce} = 9.5\text{V}$ (VSWR $_{\text{max}} = 2$ and 4dBC of Compression, $J_{ce} = 33000\text{A}/\text{cm}^2$ for single cell transistor in CW mode and $J_{ce} = 22000\text{A}/\text{cm}^2$ for bi-cell transistor in pulsed mode)
- RF Compression = 5 dB (under maximum operating conditions)
- Max DC Collector Emitter Current Density: $J_{ce} = 40000\text{A}/\text{cm}^2$ per emitter area (in pulsed mode for Bi-Cell Transistor)
- Base to Emitter Voltage: $V_{be} = 2.5\text{V}$

Detail spec:

Package: N/A

Manufacturer: UMS

APPROVAL STATUS

Qualification: Others

Other:

Highest screening level (MIL): Full qualification according to ESCC standards completed in March 2008

Evaluation programmes or other approvals:

Former space usage:

PREVIOUS PROCUREMENT AND TEST DATA

Test data (Evaluation, Lot acceptance, DPA, MIL QCI/TCI, ...):

RADIATION HARDNESS DATA

Total dose effects:

Displacement damage:

Single event effects (SEL/SEU/SET/SEFI/SEB/SEGR/others):



EPPL COMPONENT

Originator: Takashi Tamura

Status: CLOSED

Company: UMS

Accepted: 2012-06-26

REMARKS

It is the responsibility of the users to check that the process design can withstand the radiation requirements for its application. Max ratings should be in conformance with the application