

Declaration of changes from Initial Beryl VZW(T513SP) to Variant Beryl TF(T513V)

General: Beryl TF (T513V) is a variant product of Beryl VZW(T513SP):

● SOFTWARE MODIFICATIONS:

- OS update (e.g. from Android 12 to 13) / change (e.g. from Android to other OS) : No
- Protocol Stack changes: No
- MMS/STK/USAT/USIM changes: No
- DM/SUPL/VT/FUMO/SWP/HCI: No
- Other changes detail: No, software number will change, add some customized requirement

● HARDWARE MODIFICATIONS:

- Baseband changes: **NO**
- Band changes: **NO** Main bands for conformance testing changes (Yes/No): **NO**

Product	GSM	UMTS	LTE	LTE CA	5G NR SA	5G NR NSA
T513SP	GSM 900 GSM 1800 GSM1900 GSM850	B1 B2 B4 (Remove) B5 B8	B1 roaming B2 B3 roaming B4 B5 B7 B12(MFBI) roaming B13 B20 roaming B28 roaming B48 B66	LTE 2CA for LTE UL CA CA_2A-4A CA_2A-5A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-5A CA_4A-13A CA_5A-66A CA_13A-66A CA_48A-66A CA_48C LTE 2CA for LTE DL CA CA_2A-2A CA_2A-4A CA_2A-5A CA_2A-7A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-4A CA_4A-5A CA_4A-13A CA_4A-48A CA_5A-48A CA_5A-66A CA_7B CA_7C CA_7A-7A CA_7A-13A CA_7A-66A CA_13A-48A CA_13A-66A CA_48A-66A CA_48A-48A CA_48B CA_48C CA_66A-66A	N2 N5 N48 N66 N77 (PC2) N78 (PC3)	N2 N5 N66 N77 (PC2) N78 (PC3)
T513V	GSM 900 GSM 1800 GSM1900 GSM850	B1 B2 B4 (Remove) B5	B1 roaming B2 B3 roaming B4 B5 B7	LTE 2CA for LTE UL CA CA_2A-4A CA_2A-5A CA_2A-13A CA_2A-48A	N2 N5 N48 N66 N77 (PC2) N78 (PC3)	N2 N5 N66 N77 (PC2) N78 (PC3)

		B8	B12(MFBI) roaming B13 B20 roaming B28 roaming B48 B66	CA_2A-66A CA_4A-5A CA_4A-13A CA_5A-66A CA_13A-66A CA_48A-66A CA_48C LTE 2CA for LTE DL CA CA_2A-2A CA_2A-4A CA_2A-5A CA_2A-7A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-4A CA_4A-5A CA_4A-13A CA_4A-48A CA_5A-48A CA_5A-66A CA_7B CA_7C CA_7A-7A CA_7A-13A CA_7A-66A CA_13A-48A CA_13A-66A CA_48A-66A CA_48A-48A CA_48B CA_48C CA_66A-66A		
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Band change details for LTE CA/5G NR SA/NSA: (if applicable)

Technology	T513SP	T513V
LTE CA	LTE 2CA for LTE UL CA CA_2A-4A CA_2A-5A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-5A CA_4A-13A CA_5A-66A CA_13A-66A CA_48A-66A CA_48C LTE 2CA for LTE DL CA CA_2A-2A CA_2A-4A CA_2A-5A CA_2A-7A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-4A CA_4A-5A CA_4A-13A CA_4A-48A CA_5A-48A CA_5A-66A CA_7B CA_7C CA_7A-7A CA_7A-13A CA_7A-66A CA_13A-48A CA_13A-66A	LTE 2CA for LTE UL CA CA_2A-4A CA_2A-5A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-5A CA_4A-13A CA_5A-66A CA_13A-66A CA_48A-66A CA_48C LTE 2CA for LTE DL CA CA_2A-2A CA_2A-4A CA_2A-5A CA_2A-7A CA_2A-13A CA_2A-48A CA_2A-66A CA_4A-4A CA_4A-5A CA_4A-13A CA_4A-48A CA_5A-48A CA_5A-66A CA_7B CA_7C CA_7A-7A CA_7A-13A CA_7A-66A CA_13A-48A CA_13A-66A

	CA_48A-66A CA_48A-48A CA_48B CA_48C CA_66A-66A	CA_48A-66A CA_48A-48A CA_48B CA_48C CA_66A-66A
5G EN-DC	DC_2A_n5A DC_48A_n2A DC_2A_n66A DC_48A_n66A DC_2A_n77A DC_2A_n2A DC_5A_n2A DC_5A_n66A DC_5A_n77A DC_13A_n2A DC_13A_n66A DC_13A_n77A DC_48A_n5A DC_66A_n2A DC_66A_n5A DC_66A_n66A DC_66A_n77A DC_1A_n77A DC_1A_n78A DC_3A_n77A DC_3A_n78A DC_5A_n78A DC_7A_n66A DC_7A_n77A DC_7A_n78A DC_13A-48A_n2A DC_13A-48A_n66A DC_13A-48A_n77A(B48 is SCC only) DC_13A-66A_n2A DC_13A-66A_n66A DC_13A-66A_n77A DC_2A-13A_n2A DC_2A-13A_n66A DC_2A-13A_n77A DC_2A-2A_n5A DC_2A-2A_n66A DC_2A-2A_n77A DC_2A-48A_n5A DC_2A-48A_n66A DC_2A-48A_n77A(B48 is SCC only) DC_2A-5A_n2A DC_2A-5A_n66A DC_2A-5A_n77A DC_2A-66A_n2A DC_2A-66A_n5A DC_2A-66A_n66A DC_2A-66A_n77A DC_48A-66A_n2A DC_48A-66A_n5A DC_48A-66A_n77A(B48 is SCC Only) DC_48C_n5A DC_5A-48A_n77A(B48 SCC only) DC_5A-66A_n2A DC_5A-66A_n66A DC_5A-66A_n77A DC_66A-66A_n2A DC_66A-66A_n5A DC_66A-66A_n77A DC_7A-7A_n66A DC_7C_n66A DC_2A-7A_n66A DC_2A-13A_n66A DC_2A-66A_n66A DC_7A-13A_n66A DC_7A-66A_n66A	DC_2A_n5A DC_48A_n2A DC_2A_n66A DC_48A_n66A DC_2A_n77A DC_2A_n2A DC_5A_n2A DC_5A_n66A DC_5A_n77A DC_13A_n2A DC_13A_n66A DC_13A_n77A DC_48A_n5A DC_66A_n2A DC_66A_n5A DC_66A_n66A DC_66A_n77A DC_1A_n77A DC_1A_n78A DC_3A_n77A DC_3A_n78A DC_5A_n78A DC_7A_n66A DC_7A_n77A DC_7A_n78A DC_13A-48A_n2A DC_13A-48A_n66A DC_13A-48A_n77A(B48 is SCC only) DC_13A-66A_n2A DC_13A-66A_n66A DC_13A-66A_n77A DC_2A-13A_n2A DC_2A-13A_n66A DC_2A-13A_n77A DC_2A-2A_n5A DC_2A-2A_n66A DC_2A-2A_n77A DC_2A-48A_n5A DC_2A-48A_n66A DC_2A-48A_n77A(B48 is SCC only) DC_2A-5A_n2A DC_2A-5A_n66A DC_2A-5A_n77A DC_2A-66A_n2A DC_2A-66A_n5A DC_2A-66A_n66A DC_2A-66A_n77A DC_48A-66A_n2A DC_48A-66A_n5A DC_48A-66A_n77A(B48 is SCC Only) DC_48C_n5A DC_5A-48A_n77A(B48 SCC only) DC_5A-66A_n2A DC_5A-66A_n66A DC_5A-66A_n77A DC_66A-66A_n2A DC_66A-66A_n5A DC_66A-66A_n77A DC_7A-7A_n66A DC_7C_n66A DC_2A-7A_n66A DC_2A-13A_n66A DC_2A-66A_n66A DC_7A-13A_n66A DC_7A-66A_n66A

5G NR-CA	CA_n2(2A)[4] CA_n2A[4]-n5A CA_n2A-n48A CA_n2A[4]-n66A[4] CA_n2A[4]-n77A[4] CA_n5B CA_n5A-n48A CA_n5A-n66A[4] CA_n5A-n77A[4] CA_n48A-n66A CA_n48A-n77A CA_n48B CA_n48(2A) CA_n66(2A) CA_n66A[4]-n77A[4] CA_n66B CA_n77C	CA_n2(2A)[4] CA_n2A[4]-n5A CA_n2A-n48A CA_n2A[4]-n66A[4] CA_n2A[4]-n77A[4] CA_n5B CA_n5A-n48A CA_n5A-n66A[4] CA_n5A-n77A[4] CA_n48A-n66A CA_n48A-n77A CA_n48B CA_n48(2A) CA_n66(2A) CA_n66A[4]-n77A[4] CA_n66B CA_n77C
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- PCB layout/material changes: NO
- Main components changes: (备注：如下的频段列表是variant model 的频段，后面的器件是与原型机的器件对比结果：如果是新增的频段，那么器件变化的部分是new；如果是相同band的器件变化了，就是填写new)

GSM	Base Band	Antenna	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter (SAW Duplexer)
GSM 850	NO	NO	NO	NO	NO	NO	NO
GSM 900	NO	NO	NO	NO	NO	NO	NO
GSM 1800	NO	NO	NO	NO	NO	NO	NO
GSM 1900	NO	NO	NO	NO	NO	NO	NO

UMTS	Base Band	Antenna	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter (SAW Duplexer)
UMTS FDD I	NO	NO	NO	NO	NO	NO	NO
UMTS FDD II	NO	NO	NO	NO	NO	NO	NO
UMTS FDD IV	NO	NO	NO	NO	NO	NO	NO
UMTS FDD V	NO	NO	NO	NO	NO	NO	NO
UMTS FDD VIII	NO	NO	NO	NO	NO	NO	NO

LTE	Base Band	Antenna	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter (SAW Duplexer)
LTE B1	NO	NO	NO	NO	NO	NO	NO
LTE B2	NO	NO	NO	NO	NO	NO	NO
LTE B3	NO	NO	NO	NO	NO	NO	NO
LTE B4	NO	NO	NO	NO	NO	NO	NO
LTE B5	NO	NO	NO	NO	NO	NO	NO
LTE B7	NO	NO	NO	NO	NO	NO	NO
LTE B12	NO	NO	NO	NO	NO	NO	NO
LTE B13	NO	NO	NO	NO	NO	NO	NO
LTE B20	NO	NO	NO	NO	NO	NO	NO
LTE B28	NO	NO	NO	NO	NO	NO	NO
LTE B48	NO	NO	NO	NO	NO	NO	NO
LTE B66	NO	NO	NO	NO	NO	NO	NO

NR	Base Band	Antenna	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter (SAW Duplexer)
NR n2	NO	NO	NO	NO	NO	NO	NO
NR n5	NO	NO	NO	NO	NO	NO	NO
NR n48	NO	NO	NO	NO	NO	NO	NO
NR n66	NO	NO	NO	NO	NO	NO	NO
NR n77	NO	NO	NO	NO	NO	NO	NO
NR n78	NO	NO	NO	NO	NO	NO	NO

Other Radio	Antenna	AP	MODEM	Transceiver	Balun	Band pass filter	Triplexer
Bluetooth	NO	NO	NO	NO	NO	NO	NO
Wi-Fi	NO	NO	NO	NO	NO	NO	NO

- FM changes: NO
- GPS changes: NO (e.g. Saw is different)
- Memory/TP/LCD/ Camera/SIM changes: NO
- Other changes detailed: NO

● MECHANICAL MODIFICATIONS:

- Use new metal front/back cover or keypad: NO
- Mechanical shell changes: NO
- Whole size of EUT: NO

Distance of Ear reference point to bottom of handset: No

Other trinkets to change the surface of handset: No

➤ Other changes detailed: No (e.g. new mechanical design)

● **Accessory changes:**

➤ Use new charger/battery/headset/USB cable: No

APPROVED BY:

Project Manager 李蕊

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Signature:

Date: 2025.4.16

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