

Declaration of changes from Initial **T614D** to Variant **T614SP**

● 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: **FUMO changed, T614D doesn't support FUMO, T614SP support FUMO**
- Other changes detail:
 1. **T614D use Google Dialer, T614SP use GcsDialer**
 2. **Disable some bands by software**
 3. **SW version changed as to different carrier**

● HARDWARE MODIFICATIONS:

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

Product	GSM	UMTS	LTE	LTE CA	5G NR SA	5G NR NSA
T614D	GSM50/900/1800/1900	WCDMA B1/2/4/5/8	B1/B2/B3/B4/B5/B7/B12/B13/B20/B25/B26/B28/B38/B40/B41/B48/B66/B71	ULCA/ DL CA	n2/n5/n25(40MHz)/n41(HPUE)/n48/n66(40MHz)/n71/n77(only support 3450-3550MHz+3700-3980MHz for FCC)/n78 roaming	1LTE+1NR/ 2LTE+1NR
T614SP	GSM50/900/1800/1900	WCDMA B1/2/4/5/8	B1/B2/B3/B4/B5/B7/B12/B13/B20//B28/B48/B66	ULCA/ DL CA	n2/n5/n48/n66(40MHz)/n77(only support 3450-3550MHz+3700-3980MHz for FCC)/n78 roaming	1LTE+1NR/ 2LTE+1NR

Band change details for LTE CA/5G NR SA/NSA: (if applicable)

Technology	T614D	T614SP
LTE CA	"LTE 2CA for LTE ULCA" CA_2A-4A CA_2A-5A CA_2A-13A CA_2A-66A CA_4A-4A CA_4A-13A CA_12A-66A CA_13A-66A CA_41C CA_4A-12A CA_5A-66A CA_4A-5A CA_5A-48A CA_48B CA_48C CA_66B CA_66C "LTE 2CA for LTE DL CA" CA_2A-2A	"LTE 2CA for LTE UL" CA_2A-4A CA_2A-5A CA_2A-13A CA_2A-66A CA_4A-13A CA_13A-66A CA_5A-66A CA_4A-5A CA_66B CA_66C "LTE 2CA for LTE DLCA" CA_2A-2A

	CA_2A-4A CA_2A-5A CA_2A-12A CA_2A-13A CA_2A-29A CA_2A-48A CA_2C CA_2A-66A CA_2A-71A CA_4A-4A CA_4A-5A CA_4A-12A CA_4A-13A CA_4A-29A CA_4A-48A CA_4A-71A CA_5A-41A CA_5A-48A CA_5A-66A CA_12A-48A CA_12A-66A CA_13A-48A CA_13A-66A CA_29A-66A CA_25A-25A CA_41A-41A CA_41A-48A CA_41C CA_48B CA_48C CA_66A-48A CA_66A-66A CA_66B CA_66C CA_66A-71A CA_7C CA_7A-7A CA_2A-7A CA_7A-13A CA_7A-66A CA_48A-48A CA_48B CA_48C CA_66A-48A CA_66A-66A CA_66B CA_66C CA_66A-71A CA_7C CA_7A-7A CA_2A-7A CA_7A-13A CA_7A-66A	CA_2A-4A CA_2A-5A 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_13A-48A CA_13A-66A CA_48C CA_66A-66A CA_66B CA_66C CA_7C CA_7A-7A CA_2A-7A CA_7A-13A CA_7A-66A
5G EN-DC	DC_2A[4]_n2A[4] DC_5A_n2A[4] DC_13A_n2A[4] DC_66A[4]_n2A[4] DC_2A[4]_n5A DC_66A[4]_n5A DC_2A_n41A[4] DC_66A[4]_n41A DC_66A_n41A[4] DC_2A[4]_n66A[4]	DC_5A_n2A[4] DC_13A_n2A[4] DC_66A[4]_n2A[4] DC_2A[4]_n5A DC_66A[4]_n5A DC_2A[4]_n66A[4]

DC_5A_n66A[4] DC_7A_n66A	DC_5A_n66A[4] DC_7A_n66A
DC_13A_n66A[4] DC_66A[4]_n66A[4] DC_2A[4]_n71A DC_66A[4]_n71A DC_2A[4]_n77A[4] DC_5A_n77A[4] DC_7A_n77A	DC_13A_n66A[4] DC_2A[4]_n77A[4] DC_5A_n77A[4] DC_7A_n77A
DC_13A_n77A[4] DC_66A[4]_n77A[4] DC_5A_n78A DC_7A_n78A 2LTE+1NR DC_2A-5A_n2A[4]	DC_13A_n77A[4] DC_66A[4]_n77A[4] DC_5A_n78A DC_7A_n78A 2LTE+1NR DC_2A-5A_n2A[4]
DC_2A-13A_n2A[4]	DC_2A-13A_n2A[4]
DC_2A-66A_n2A[4] DC_5A-66A_n2A[4]	DC_2A-66A_n2A[4] DC_5A-66A_n2A[4]
DC_13A-48A_n2A[4] (B48 only for SCC) DC_13A-66A_n2A[4]	DC_13A-48A_n2A DC_13A-66A_n2A[4]
DC_48A-66A_n2A[4] (B48 only for SCC) DC_66A-66A_n2A[4] DC_2A-2A_n5A	DC_48A-66A_n2A DC_66A-66A_n2A[4] DC_2A-2A_n5A
DC_2A-48A_n5A (B48 only for SCC) DC_2A-66A_n5A	DC_2A-48A_n5A DC_2A-66A_n5A
DC_48A-66A_n5A (B48 only for SCC) DC_66A-66A_n5A	DC_48A-66A_n5A DC_66A-66A_n5A
DC_2A-66A_n41A[2] DC_2A-2A_n66A[4] DC_2A-5A_n66A[4] DC_2A-7A_n66A	DC_2A-2A_n66A[4] DC_2A-5A_n66A[4] DC_2A-7A_n66A
DC_2A-13A_n66A[4]	DC_2A-13A_n66A[4]
DC_2A-48A_n66A[4] (B48 only for SCC) "DC_2A-66A_n66A[4] DC_2A-(n)66AA" DC_5A-66A_n66A[4] DC_7A-7A_n66A DC_7C_n66A DC_7A-13A_n66A DC_7A-66A_n66A	DC_2A-48A_n66A DC_2A-66A_n66A[4] DC_5A-66A_n66A[4] DC_7A-7A_n66A DC_7C_n66A DC_7A-13A_n66A DC_7A-66A_n66A
DC_13A-48A_n66A[4] (B48 only for SCC) DC_13A-66A_n66A[4]	DC_13A-48A_n66A DC_13A-66A_n66A[4]
DC_48A-66A_n66A[4] (B48 only for SCC) DC_2A-2A_n71A DC_2C_n71A DC_2A-66A_n71A	
DC_2A-2A_n77A[4]	DC_2A-2A_n77A[4]

	"DC_2A-5A_n77A[4] for UL 5A_n77A[4] DC_2A-5A_n77A[4] for UL 2A_n77A[4]" DC_2A-13A_n77A[4] DC_2A-48A_n77A[4] (B48 only for SCC) DC_2A-66A_n77A[4] DC_5A-48A_n77A[4] (B48 only for SCC) "DC_5A-66A_n77A[4] for UL DC_5A_n77A[4] DC_5A-66A_n77A[4] for UL DC_66A_n77A[4]" DC_13A-48A_n77A[4] (B48 only for SCC) DC_13A-66A_n77A[4] DC_48A-66A_n77A[4] (B48 only for SCC) DC_66A-66A_n77A[4]	"DC_2A-5A_n77A[4] for UL 5A_n77A[4] DC_2A-5A_n77A[4] for UL 2A_n77A[4]" DC_2A-13A_n77A[4] DC_2A-48A_n77A DC_2A-66A_n77A[4] DC_5A-48A_n77A "DC_5A-66A_n77A[4] for UL DC_5A_n77A[4] DC_5A-66A_n77A[4] for UL DC_66A_n77A[4]" DC_13A-48A_n77A DC_13A-66A_n77A[4] DC_48A-66A_n77A DC_66A-66A_n77A[4]
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_n5(2A) CA_n5B CA_n5A-n48A CA_n5A-n66A[4] CA_n5A-n77A[4] CA_n25(2A)[4] CA_n25A[4]-n41A[4] CA_n25A[4]-n66A[4] CA_n48A-n66A CA_n25A[4]-n71A CA_n25A[4]-n77A[4] CA_n41(2A)[4] CA_n41A[4]-n66A[2] CA_n41A[4]-n71A CA_n41A[4]-n77A[4] CA_n41C[4] CA_n48A-n66A CA_n48A-n77A CA_n48B CA_n48C CA_n48(2A) CA_n66(2A)[4] CA_n66A[4]-n71A CA_n66A[4]-n77A[4] CA_n66B[4] CA_n71B CA_n71(2A) CA_n71A-n77A[4] CA_n77(2A)[4] CA_n77C	CA_n2(2A) CA_n2A-n5A CA_n2A-n48A CA_n2A-n66A CA_n2A-n77A CA_n5(2A) CA_n5B CA_n5A-n48A CA_n5A-n66A CA_n5A-n77A CA_n48A-n66A CA_n48A-n77A CA_n48B CA_n48C CA_n48(2A) CA_n66(2A) CA_n66A-n77A CA_n66B CA_n77C

- 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
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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 B14	NO	NO	NO	NO	NO	NO	NO
LTE B17	NO	NO	NO	NO	NO	NO	NO
LTE B20	NO	NO	NO	NO	NO	NO	NO
LTE B25	NO	NO	NO	NO	NO	NO	NO
LTE B26	NO	NO	NO	NO	NO	NO	NO
LTE B28	NO	NO	NO	NO	NO	NO	NO
LTE B29	NO	NO	NO	NO	NO	NO	NO
LTE B38	NO	NO	NO	NO	NO	NO	NO
LTE B40	NO	NO	NO	NO	NO	NO	NO
LTE B41	NO	NO	NO	NO	NO	NO	NO
LTE B42	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
LTE B71	NO	NO	NO	NO	NO	NO	NO

NR	Base Band	Antenna	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter (SAW Duplexer)
NR n1	NO	NO	NO	NO	NO	NO	NO
NR n2	NO	NO	NO	NO	NO	NO	NO
NR n3	NO	NO	NO	NO	NO	NO	NO
NR n5	NO	NO	NO	NO	NO	NO	NO
NR n7	NO	NO	NO	NO	NO	NO	NO
NR n8	NO	NO	NO	NO	NO	NO	NO
NR n12	NO	NO	NO	NO	NO	NO	NO
NR n14	NO	NO	NO	NO	NO	NO	NO
NR n20	NO	NO	NO	NO	NO	NO	NO
NR n25	NO	NO	NO	NO	NO	NO	NO
NR n26	NO	NO	NO	NO	NO	NO	NO
NR n28	NO	NO	NO	NO	NO	NO	NO
NR n30	NO	NO	NO	NO	NO	NO	NO
NR n38	NO	NO	NO	NO	NO	NO	NO
NR n40	NO	NO	NO	NO	NO	NO	NO
NR n41	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 n70	NO	NO	NO	NO	NO	NO	NO
NR n71	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

- **Update of standards:** NO

APPROVED BY:

Project Manager: 翟小娟



Signature:

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