

## RF Exposure Report

TCL OVERSEAS MARKETING LTD

2.0 Channel Dolby Atmos All in One Soundbar

Model Number: S45H

Additional Model: S45H-CA, S4BH

IC: 26250-S45H

Applicant:	TCL OVERSEAS MARKETING LTD
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## Maximum Permissible Exposure

### 1. Applicable Standard

RSS-102 Issue 5, March 2015

#### 1.1. Limit

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $4.49/f^{0.5}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

For example

Frequency (MHz)	EIRP (W)	EIRP (dBm)
920	1.39	31.43
850	1.32	31.19
1900	2.28	33.58
2450	2.71	34.33
5200	4.54	36.57

## 2. Conducted Power Result

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)
GFSK	2402	5.84	3.8371
	2441	5.41	3.4754
	2480	5.38	3.4514
π/4-DQPSK	2402	6.51	4.4771
	2441	6.03	4.0087
	2480	6.07	4.0458
8-DPSK	2402	6.84	4.8306
	2441	6.43	4.3954
	2480	6.43	4.3954
BLE 1M	2402	5.62	3.6475
	2440	5.25	3.3497
	2480	5.22	3.3266
BLE 2M	2402	5.64	3.6644
	2440	5.28	3.3729
	2480	5.18	3.2961

## 3. Calculated Result and Limit

Mode	Peak output power (dBm)	Ant. gain (dBi)	E.I.R.P (dBm)	Ture-up power (dBm)	Max Ture-up power		Limit (W)	Test Result
					(dBm)	(W)		
GFSK	5.84	2.91	8.75	8±1	9	0.0079	2.676	Complies
π/4-DQPSK	6.51	2.91	9.42	9±1	10	0.0100	2.676	Complies
8-DPSK	6.84	2.91	9.75	9±1	10	0.0100	2.676	Complies
BLE 1M	5.62	2.91	8.53	8±1	9	0.0079	2.676	Complies
BLE 2M	5.64	2.91	8.55	8±1	9	0.0079	2.676	Complies

- Limited=  $1.31 \times 10^{-2} f^{0.6834}$  W (where  $f$  is in MHz);
- We choose 2402MHz(Lowest frequency operate at Bluetooth) to calculate MPE limit as higher frequency will have higher MPE limits.

**End of Test Report**