EUT Description:Smart Lock
Test type.:P01-K10C
Series model:P01-K10,P01-K10B,P01-K10D,P01-205,P01-205A,P01-205B,P01-205C,
P01-206,P01-206A,P01-206B,P01-206C,P01-207,P01-207A,P01-207B,P01-207C,
P02-K10,P02-K10B,P02-K10C,P02-K10D,P02-205,P02-205A,P02-205B,P02-205C,P02-206,
P02-206A,P02-206B,P02-206C,P02-207,P02-207A,P02-207B,P02-207C,P01-K10A
Equipment type: Mobile equipment

RF Exposure Evaluation
According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate theenvironrment impact of human exposure to radio frequency(RF) Radiation as specifed in§1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm2)	Averaging time (minutes)
(0)Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f 2)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(d)Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f 2)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f= frequency in MHz.*= Plane-wave equivalent power density.

F = frequency in MHz
Formula: Pd = (Pout*G)/(4*π*r2)
Where :
Pd = power density in mW/cm2,
Pout = output power to antenna in mW;
G = gain of antenna in linear scale,
π= 3.14;
R = distance between observation point and center of the radiator in cm
Pd id the limit of MPE, 1 mW/cm2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

Measurement Result:

TX frequency range: 13.56MHz

Operation Frequency: NFC: 13.56MHzPower density limited: 1mVw cmAntenna Type: Induction coil

R=20cm

EIRP=E-104.7+20logD=62.45-104.7+20log3=-32.707dBm

Maximum Conducted Output Power: -32.707dBm

NFC

Frequency(MHz)	EIRP Power (dBm)	EIRP Power (mW)	Turn-up (dBm)	Max Turn-up (dBm)	Evaluation result (mW/cm2)	Power denslty Lmits (mW/cm2)
13.56	-32.70	0.0005	-32± 1	-31	0.0000001	0.0090

Conclusion: the max result : ≤ 1.0 compliance with FCC's RF Exposure.

So a SAR test is not required