Gps Based signal generator for tachographs

Electrical characteristics

Values	Min.	Typ.	Max.	MU
Power supply				
Supply voltage (recommended working condition) V_{batt}	9	-	29	V
Current consumption				
V_{BATT} =12V (GPS fixed, IGNITION OFF)	-	55	55	mA
V_{BATT} =12V (GPS fixed, IGNITION ON, v <= 5km/h)	-	58	60	mA
V_{BATT} =12V (GPS fixed, IGNITION ON, v >= 5km/h)	-	53	65	mA
Frequency output				
Output resistance; **$R_{pull-up}$**	-	1,5	-	kOhm
Limiting current to ground, OC OVP and thermal overload protected	-	1	-	A
Logic level **L**	0	300	550	mV
Logic level **H**	V_{batt}-1*	-	V_{batt}	V
Freq. OUT pin state in deactivated state (v <= 5km/h)	-	H	-	Logic
Threshold speed for activating the Freq. OUT pin	-	5	-	km/h
Number of impulses related to 1 km (**K factor**)	-	8000	-	
Frequency value related to the vehicle speed**	2.221	2.222	2.223	Hz
Period while the frequency is maintained and the GPS signal has been lost***	-	120	-	Sec.
CAN output				
CAN load resistance (externally must be in the tachograph)	-	120	-	Ohm
Message compliance:	SAEJ1939 SPN904 Front axle speed			

Notes:
* Must be computed by calculating the loading resistance
** F[Hz] = v[km/h] **x** 2.222
*** After this time is elapsed the Freq. OUT is deactivated

Our products are CE certified and complies with the following harmonized standards

Disturbance emission: Radiated RF emission test: 2004/104/EC ENECE 10/2012
Conducted transient on the DC power line : 2004/104/EC ENECE 10/2012

Disturbance Susceptibility: Immunity against RF radiation: 2004/104/EC UNECE 10/2012 (15V/m (20-80MHz), 25V/m (0.08GHz-2GHz) modulation AM and PM
Immunity against conducted transients: 2004/104/EC UNECE 10/2012, level III, pulse 1, 2a, 3a, 3b criteria D