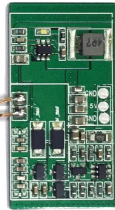
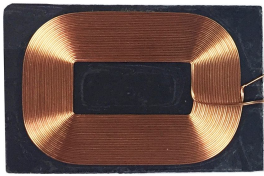
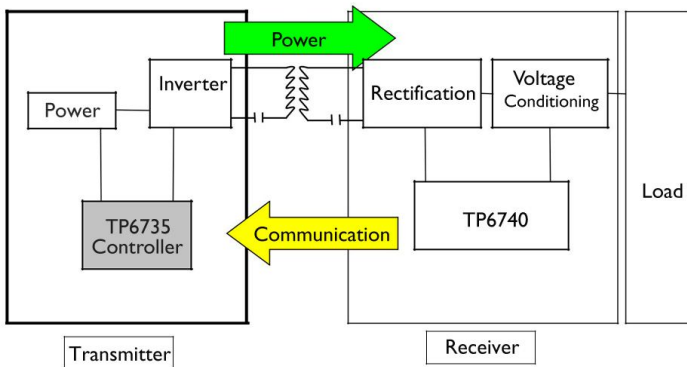


WCM-TP6740

Qi compliant Wireless Power Receiver



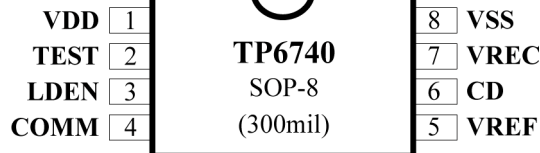
The WCM-TP6740 is a high efficiency, wireless power receiver for portable applications. The TP6740 device integrates digital controller required to comply with Qi V1.1 communication protocol and all necessary control algorithms needed for efficient. Together with TP6735 transmitter-side controller, the TP6740 enables a complete wireless power transfer system for Qi solution. By utilizing near-field inductive power transfer, the receiver coil embedded in the portable device can pick up the power transmitted by transmitter coil.



FEATURE

- . Signal Modulation for Qi Communication Protocol
- . 5V Output
- . Supports up to 5W (5V/ 1A) power output
- . Active adjust rectifier voltage to fit loading change

PIN DESCRIPTIONS



Pin	Pin Name	Pin Description
1	VDD	TP6740 Power 2.5V
2	TEST	TEST / Reserve.
3	LDEN	Enable/ Disable output control. When voltage received from second coil is high enough to loading, LDEN pin will output low level
4	COMM	Qi protocol signal output
5	VREF	5V output monitor
6	CD	Current Detect
7	VREC	Voltage divider input of rectifier
8	VSS	GND

ELECTRICAL CHARACTERISTICS

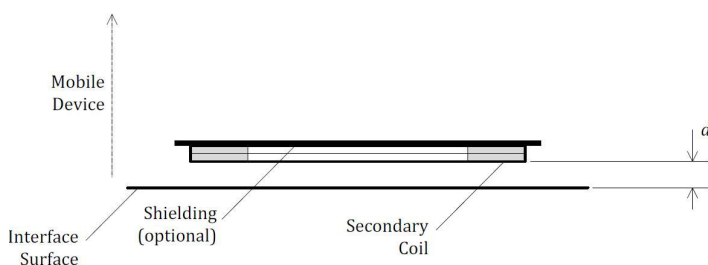
Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$)

Parameter	Rating	Unit
Supply Voltage	$V_{SS} - 0.3$ to $V_{SS} + 6.5$	V
Input Voltage	$V_{SS} - 0.3$ to $V_{DD} + 0.3$	
Output Voltage	$V_{SS} - 0.3$ to $V_{DD} + 0.3$	
Output current high per 1 PIN	-25	mA
Output current high per all PINs	- 80	
Output current low per 1 PIN	+30	
Output current low per all PINs	+ 150	
Maximum Operating Voltage	5.5	V
Operating Temperature	-40 to +85	$^\circ\text{C}$
Storage Temperature	-65 to +150	

DC Characteristics ($T_A = 25^\circ\text{C}$, $V_{DD} = 4.0\text{V}$ to 5.5V)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit	
Operating Voltage	V_{DD}	25°C	1.9	5.0	5.5	V	
COMM Source Current	I_{OH}	All Output	$V_{DD} = 5\text{V}$ $V_{OH} = 0.9V_{DD}$	4	8	-	V
		All Output	$V_{DD} = 3\text{V}$ $V_{OH} = 0.9V_{DD}$	1.5	3	-	mA
COMM Sink Current	I_{OL}	All Output	$V_{DD} = 5\text{V}$ $V_{OH} = 0.1V_{DD}$	10	20	-	mA
			$V_{DD} = 3\text{V}$ $V_{OL} = 0.1V_{DD}$	5	10	-	
Input Leakage Current (pin high)	I_{ILH}	All Input	$V_{IN} = V_{DD}$	-	-	1	uA
Input Leakage Current (pin low)	I_{ILL}	All Input	$V_{IN} = 0\text{V}$	-	-	-1	
Power Supply Current	I_{DD}	Run 4 Mhz, LVR enable	$V_{DD} = 5\text{V}$	-	1.4	-	mA
			$V_{DD} = 3\text{V}$	-	0.6	-	
LVR Reference Voltage	V_{LVR}	$T_A = 25^\circ\text{C}$	-	2.2	-	V	
LVR Hysteresis Voltage	V_{HYST}	$T_A = 25^\circ\text{C}$	-	3.1	-	V	
			-	± 0.1	-	V	
Low Voltage Detection Time	T_{LVR}	$T_A = 25^\circ\text{C}$	100	-	-	us	

SECONDARY COIL ASSEMBLY



Interface Surface

The distance from the Secondary Coil to the Interface Surface of the Mobile Device shall not exceed $d_z = 2.5\text{mm}$, across the bottom face of the Secondary Coil.

* Features and specification are subject to change without notice.