

Ignition Controller of Motorcycle

FM4213 is an application specific integrated circuit for electronic ignition system of 125ml cylinder motorcycle. It's controlled by the pulses generated by the magnetic sensor, outputs pulses which phases are changed with the rotation speed, trig the SCR to generate ignition sparks.

Features:

- Power supply by magnetoelectric motor and clamping at 9.2V
- Less external components and wide applicability
- Low static current, typical is 5mA
- DIP14 package
- Compatible with MN4213
- Aim at the disfigurement of MN4213 re-designing, with high reliability and self-independent property right.
- High quality and stability for using 3 μ m Bipolar process

electrical characteristics:

Table 1 DC characteristics (Ta=25°C I_{DC}=5mA)

symbol	Testing condition	value			unit
		Min.	Typ.	Max.	
V _{CC}	I ₂ , I ₇ =0	9.0	9.2	9.5	V
R _d	I ₂ , I ₇ =0			30	Ω
VOL(10)	I ₂ , I ₇ =0		0.0	0.1	V
VOH(10)	I ₂ =100 μ A, I ₇ =-100 μ A	1.6	1.8		V
VOL(12)	I ₂ =0, I ₇ =-100 μ A			0.1	V
VOH(12)	I ₂ =100 μ A, I ₇ =0	4.0	4.4	4.8	V
VOL(13)	I ₂ =0, I ₇ =-100 μ A		0.1	0.4	V
VOH(13)	I ₂ =0, I ₇ =0	8.5	9.0		V
I ₁₃	I ₂ =0, I ₇ =-100 μ A			100	μ A

Table 2 transient characteristics (Ta=25°C)

symbol	Testing condition	value			Unit
		Min.	Typ.	Max.	
V (10)	t=2ms T=48ms	2			V
V (12)			0.9	1.5	V
THL (12)			50	100	μ S
VLH (12)		4.2	4.4	4.6	V
VHL (12)		6.0	6.4	6.6	V

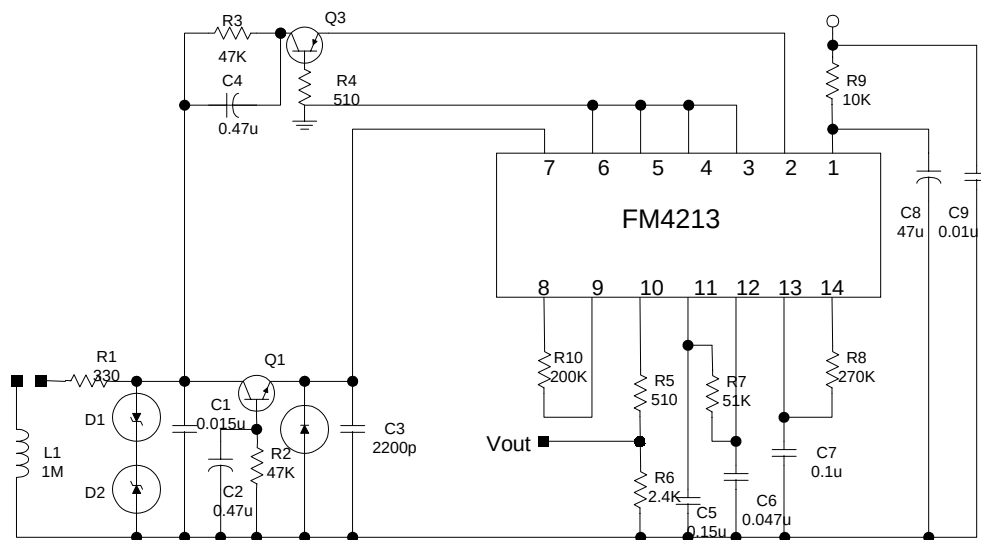


TLH (12)		1.95	2.0	2.2	MS
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Pin description

Pin	sympo	Pin	symbol
1	V _{cc}	10	OUT
2, 7	IN	11	Vcharge1
3, 4, 5, 6	GND	12	ADV curve
8	V _{REF}	13	RPM curve
9	I _{REF}	14	Vcharge2

Application circuit



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