上海复旦微电子股份有限公司
SHANGHAI FUDAN MICROELECTRONICS CO., LTD

Hall Effect Pickup Ignition Controller FM497

The FM497 is an integrated electronic ignition controller for breakerless ignition systems using Hall effect sensors.The device drives an NPN external darlington to control the coil current providing the required stored energy with low dissipation.This circuit has many advantages:low power dissipation,stable,high ignition energy,self-protection,widely application conditions,long using life,etc,It's compatible for overseas products of the same class.

FEATURES

- Direct driving of the external power darlington
- Coil current charging angle (dweil) control
- Programme coil current peak limitation
- Programmable dwell recovery time when 94% nominal current not reached
- Rpm output
- Permanent conduction protection
- Overvoltage protection for external darlington
- Internal supply zener
- Reverse battery protection

PIN FUNCTIONS

PIN	FUNCTIONS	PIN	FUNCTIONS
1	GND	9	MAX CONDITION TIME
2	SIGNAL GND	10	DWELL CONTROL
3	POWER SUPPLY	11	DWELL CONTROL
4	N.C	12	BIAS CURRENT
5	HALL EFFECT INPUT	13	CURRENT SENSING
6	RPM OUTPUT	14	DRIVER EMITTER OUTPUT
7	AUX ZENER	15	OVERVOLTAGE LIMIT
8	RECOVERY TIME	16	DRIVER COLLECTOR INPUT

ABSOLUTE MAXIMUM RATINGS

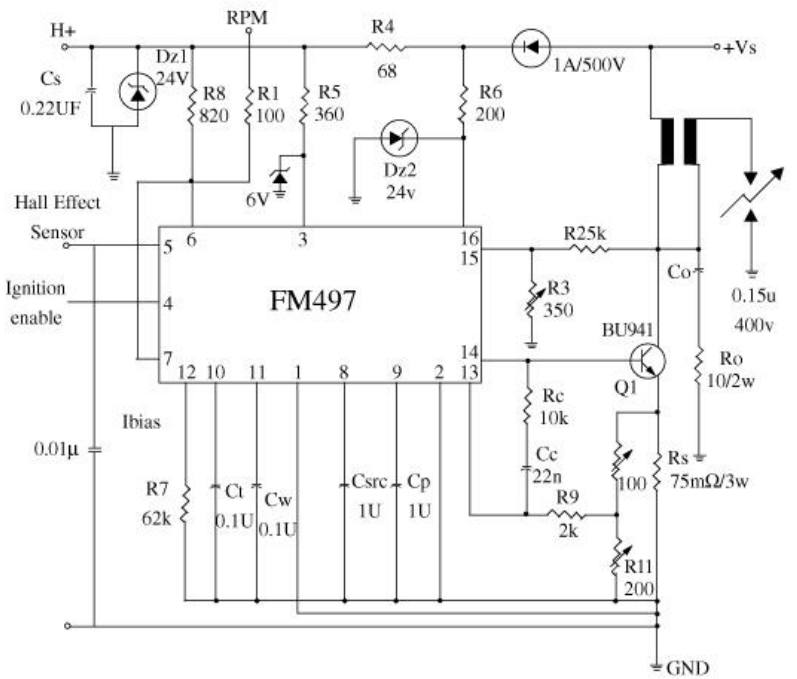
Symbol	Parameter	Value	Unit
I3	DC Supply current	200	mA
	Transient Supply Current (fall time constant=100ms)	800	
V3	Supply Voltage	INt Limited toVz3	
V6	RPM Voltage	28	V
I16	DC Driver Collector Current	300	
	Pulse (t ⩽ 3ms)	600	mA

I7	Auxiliary Zener Current	40	mA
I15	D.C.Over voltage Zener Current Pulse	15 35	mA
Vr	Reverse Battery Voltage if Application Circuit of fig. is used	-16	V
Tstg	Junction and Storage Temperature Range	-55~150	℃
Ptot	Power Dissipation	0.65	W

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V3	Operating Supply voltage		3.5			V
I3	Supply Current	V3=6V V3=4V	5 7	18	25 13	mA mA
Vs	Voltage Supply				28	V
V5	Input Voltage	Low status High status	2.5		0.6	V V
I5	Input Current	V5=Low	-400		-50	μA
V16-14	Darlington Driver Sat.Current	I14=50mA I14=180mA			0.5 0.9	V V
I11c	Cw Charge Current	Vs=5.3-16V V11=0.5V T=10-33ms	-11.0	-9.3	-7.8	μA
I11d	Cw discharge Current		0.5	0.7	1.0	μA
V6sat	RPM output	I6=18.5mA I6=25mA			0.5 0.8	V V
V12	Referonce Voltage		1.20	1.25	1.30	V

APPLICATION CIRCUIT



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