

To all our customers

Regarding the change of names mentioned in the document, such as Mitsubishi Electric and Mitsubishi XX, to Renesas Technology Corp.

The semiconductor operations of Hitachi and Mitsubishi Electric were transferred to Renesas Technology Corporation on April 1st 2003. These operations include microcomputer, logic, analog and discrete devices, and memory chips other than DRAMs (flash memory, SRAMs etc.)

Accordingly, although Mitsubishi Electric, Mitsubishi Electric Corporation, Mitsubishi Semiconductors, and other Mitsubishi brand names are mentioned in the document, these names have in fact all been changed to Renesas Technology Corp. Thank you for your understanding. Except for our corporate trademark, logo and corporate statement, no changes whatsoever have been made to the contents of the document, and these changes do not constitute any alteration to the contents of the document itself.

Note : Mitsubishi Electric will continue the business operations of high frequency & optical devices and power devices.

Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

M62235P/FP

Switching power supply secondary side control

Terminal description

terminal No.	symbol	Description on functions
1 (1)	Vcc	terminal for power supply
2 (3)	PC2	output terminal for overvoltage/overcurrent detection signal(open collector output)
3 (4)	CT	delay time setting terminal for overcurrent detection(tpd=400mS@47uF)
4 (6)	VD1	overvoltage detection terminal(detection vplage:1.26V)
5 (7)	VD2	overvoltage detection terminal(detection vplage:1.26V)
6 (8)	CD2	overcurrent detection terminal(detection vplage:-185mV)
7 (9)	CD1	overcurrent detection terminal(detection vplage:-155mV)
8 (11)	GND	GND terminal
9 (12)	VIN	input terminal for voltage control amp.
10 (14)	PC1	output terminal for voltage control amp.(open collector output)

ABSOLUTE MAXIMUM RATINGS(Ta=25°C,unless otherwise noted.)

Symbol	Parameter	Condition		Ratings	Unit
Vcc	supply voltage			25	V
IPC	PC1,2 terminal current			10	mA
VPC	PC1,2 terminal voltage			25	V
VVD	VD1,2 terminal voltage			25	V
VCD	CD1,2 terminal voltage			-0.3 ~ 1.0	V
Pd	power dissipation		10 pin SOP	440	mW
			14 pin DIP	1100	
Kq	thermal derating ratio	Ta>25°C	10 pin SOP	4.4	mW/°C
			14 pin DIP	11.0	
Topr	operating temperature			-30 ~ +85	°C
Tstg	storage temperature			-40 ~ +125	°C

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ELECTRICAL CHARACTERISTICS(Ta=25°C, Vcc=5V, unless otherwise noted.)

BLOCK	Symbol	Parameter	Test conditions	Limits			Unit
				Min.	Typ.	Max.	
	Vcc	supply voltage range		5	12	24	V
	Icc	circuit current			5		mA
	VREF	reference voltage		1.20	1.26	1.32	V
	VREF/ΔT	ref. voltage temp. coefficient			0.01		%/°C
	Reg-in	ref. volt. fluctuation over Vcc	Vcc=5V~24V		5	12	mV
	IinVIN	control amp. input bias current		-1.0		1.0	μA
	VsatPC1	control amp.output sat. volt.	IP.C1=5mA		0.3		V
	VDET1	overvoltage detection volt.1	12V system	1.16	1.26	1.36	V
	IinVD1	input current1	12V system	-1.0		1.0	μA
	VDET2	overvoltage detection volt.2	3.3V system	1.16	1.26	1.36	V
	IinVD2	input current2	3.3V system	-1.0		1.0	μA
	IDET1	overcurrent detection volt.1	12V system	-163	-155	-147	mV
	IinCD1	input current1	12V VCD1=155mV		-100		μA
	IDET2	overcurrent detection volt.2	3.3V system	-195	-185	-175	mV
	IinCD2	input current2	3.3V VCD2=185mV		-100		μA
	tdCT	delay time	CT=47μF	300	400	500	msec
	VsatPC2	PC terminal output sat. volt.	IP.C2=5mA		0.3		V

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APPLICATION CIRCUIT

