

5.5 Power Conversion (1)

Switching Power Supply

Control ICs range

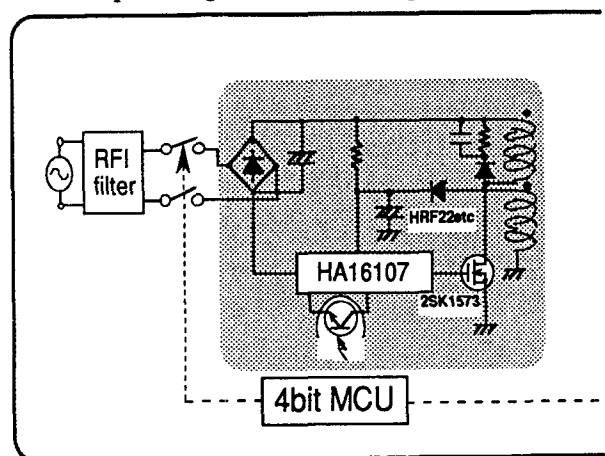
Type.No	Vcc (V) max	Icc (mA) max	F (kHz) max	Io (mA) max	Topr (°C)	Package		Remark
						DIP	SOP	
HA16654A	40	13	500	100	-20 to +85	DP-18	FP-14	Suitable for forward method
HA16664A	40	7	200	100	-20 to +85	DP-8	FP-14	Suitable for forward method
HA16666	40	12	600	500	-20 to +85	DP-16	FP-16	• Suitable for forward method • Built-in two over-current protect circuits
HA16107	30	16	600	2000	-20 to +85	DP-16	FP-16	• Timer latch protection
HA16108								• ON/OFF timer protection
HA16109								• Timer latch protection
HA16111								
HA17524	40	10	500	100	-20 to +75	DP-16	FP-16	• Push-pull operating • Possible to set up Dead-time
HA17451/A	40	2.6	300	50	-20 to +85	DP-16	FP-16	• Dual switching regulator • Suitable for DC-DC converter
HA17384 HA17385	40	17	300	1500	-20 to +85	DP-8	FP-14	• Suitable for fly-back method • Current mode control

Introduction

Regulated DC power supplies are needed for most analog and digital electronic systems. Most power supplies are designed to meet some or all of the following requirements:

- **Regulated Output.** The output voltage must be held constant within a specified tolerance for changes within a specified range in the input voltage and the output loading.
- **Isolation.** The output may be required to be electrically isolated from the inputs.

AC Adapter using Forward Switching Regulator



Diode range

Classification	Package	Type No.	Maximum ratings		Electrical characteristics	
			V _{RM} (V)	I _O (A)	V _F /V _Z (V)max.	@I _F /I _Z (A)/(mA)
Schottky rectification for Secondary rectifier	MPAK	HRW0203A	30	0.2	0.5	0.2
		HRW0302A	20	0.3	0.4	0.3
		HRW0503A	30	0.5	0.55	0.5
	LRP	HRF22	40	1	0.55	1.0
		HRF32	90	1	0.8	1.0
	DO-41	HRP22	50	1	0.55	1.0
		HRP32	90	1	0.8	1.0
	DO-41MOD	HRP100	50	1	0.55	1.0
	TO-220AB	HRW26	40	10	0.55	4.0
		HRW34	90	5	0.8	2.0
		HRW36	90	10	0.8	4.0
	TO-220FM	HRW26F	40	10	0.55	4.0
		HRW34F	90	5	0.8	2.0
		HRW36F	90	10	0.8	4.0
		HRW37F	90	20	0.85	8.0
	TO-3P	HRW3004A	40	30	0.55	15.0
High speed SW	DO-35	1SS118	50	200	0.9	3.0
High voltage SW	DO-35	1SS81/82/83	150/200/250	200	1.0	75
	LLD	HSK83	250	150	1.0	75
	MPAK	HSM83	250	100	1.2	100
General Zener	DO-35	HZ series	Po	500 (mW)	1.5 to 38.0	5 to 2
	MHD	HZS series	Po	400 (mW)	1.5 to 38.0	5 to 2
	MPAK	HZM-N series	Po	200 (mW)	1.9 to 38.0	5 to 2
High power Zener	DO-41	HZ-P series	Po	800 (mW)	1.88 to 40.0	40 to 10
	LRP	HZ-F series	Po	900 (mW)	1.88 to 40.0	40 to 10