

NTE7044 Integrated Circuit Switching Regulator Control Circuit

Description:

The NTE7044 is an integrated circuit in a 9-Lead SIP type package which contains a PWM switching regulator control circuit and protect circuit on a single chip.

Features:

- Soft Start Circuit
- 0 to 0.7 Duty
- Protection Circuit for Overvoltage and Current
- External Trigger Available
- High Supply Voltage Protection
- Low Supply Voltage Protection
- Reference Voltage Provided by an External Zener Diode

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC}	14V
Circuit Voltage	
V_{6-5}	0V to 14.4V
V_1, V_2, V_{4-5}	0 to V_{6-5}
V_{3-5}	3V to 10V
V_{7-5}	0V to 8V
V_8, V_{9-5}	-3V to +4V
Supply Current, I_6	18mA
Circuit Current, I_4	-1mA to +50mA _{peak}
Power Dissipation, P_D	260mW
Local Power Dissipation (Q_1), P_D	60mW
Operating Ambient Temperature Range, T_{opr}	-20° to +75°C
Storage Temperature Range, T_{stg}	-55° to +150°C

Note 1. + is flow-in current to the circuit, while - is flow-out current.

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Circuit Current	I_{tot}		8.4	10.5	12.6	mA
Oscillation Frequency	f_{OSC}		14.0	14.8	15.6	kHz
Output Pulse Duty (Min)	$t_w(\text{duty})$		67	72	77	%
Output Pulse Duty (Max)	$t_w(\text{duty})$		-	0	0	%

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Saturation Voltage	$V_{O(\text{sat})}$	$I_4 = 10\text{mA}$	–	0.10	0.30	V
		$I_4 = 50\text{mA}$	–	0.62	1.00	V
High Supply Voltage Protection	V_{HVP}		13.2	13.9	14.6	V
Low Supply Voltage Protection	V_{LVP}		4.8	5.2	5.6	V
Input Voltage, External Trigger Start	V_{t1}		0.66	0.71	0.76	V
Input Voltage, One-Shot Multi Start	V_{t2}		0.68	0.73	0.78	V

Pin Connection Diagram
(Front View)

