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## NTE7038 Integrated Circuit Module, 5 Output Positive Voltage Regulator for VCR

**Features:**

- 5 Outputs
- Output Voltage Select Function

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

Maximum DC Input Voltage, $V_{IN}$ (DC) Max .....	30V
Maximum Average Output Current, $I_O$ Max .....	1.0A
Maximum Peak Output Current (0.2sec max)), $I_O$ Max	
$V_{O1}, V_{O3}$ .....	2.5A
$V_{O2}$ .....	2.0A
$V_{O4}, V_{O5}$ .....	1.5A
Operating Case Temperature, $T_C$ Max .....	$+105^\circ\text{C}$
Junction Temperature, $T_J$ Max .....	$+150^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-30^\circ$ to $+105^\circ\text{C}$
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	$4.5^\circ\text{C/W}$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Test Conditions	$V_{O1}$	$V_{O2}$	$V_{O3}$	$V_{O4}$	$V_{O5}$	Unit
Output Voltage Setting	Condition 1	$13.0 \pm 0.2$	$12.2 \pm 0.2$	$6.0 \pm 0.2$	$5.1 \pm 0.2$	$5.1 \pm 0.2$	V
	Condition 1, Note 1	0.1	0.1	$5.97 \pm 0.2$	0.1	0.1	V Max
Ripple Voltage	Condition 1	5	5	2	2	2	$\text{mV}_{P-P}$ Max
Temperature Coefficient	Condition 1	0.02	0.02	0.02	0.02	0.02	$\% / ^\circ\text{C}$ Max
Line Regulation	Condition 2	12	12	20	15	15	$\text{mV/V}$ Max
	Condition 3	1	1	1	1	3	$\text{mV/V}$ Max
Load Regulation	Condition 4	40	40	25	40	700	$\text{mV/A}$ Max
Minimum Input-Output Voltage Difference	Condition 5	1.2	2.0	1.2	1.8	1.8	V Max

Note 1. External setting available.

### Test Conditions:

- Condition 1:  $V_B = 30V$ , Ripple =  $10mV_{P-P}$   
 $V_{IN}$  (DC) 1 =  $17V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$ , Input Ripple Voltage =  $1.5V_{P-P}$   
 $V_{IN}$  (DC) 2 =  $14V$ ,  $I_{O4} = 0.3A$ ,  $I_{O5} = 0.1A$ , Input Ripple Voltage =  $1.5V_{P-P}$
- Condition 2:  $V_B = 30V \pm 4V$   
 $V_{IN}$  (DC) 1 =  $17V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$   
 $V_{IN}$  (DC) 2 =  $14V$ ,  $I_{O4} = 0.3A$ ,  $I_{O5} = 0.1A$
- Condition 3:  $V_B = 30V$   
 $V_{IN}$  (DC) 1 =  $14.5V$  to  $22V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$   
 $V_{IN}$  (DC) 2 =  $7.5V$  to  $17V$ ,  $I_{O4} = 0.3A$ ,  $I_{O5} = 0.1A$
- Condition 4:  $V_B = 30V$   
 $V_{IN}$  (DC) 1 =  $17V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0$  to  $1A$   
 $V_{IN}$  (DC) 2 =  $14V$ ,  $I_{O4} = 0$  to  $0.5A$ ,  $I_{O5} = 70mA$  to  $200mA$
- Condition 5:  $V_B = 30V$ ,  $I_{O1} = I_{O2} = I_{O3} = 1A$ ,  $I_{O4} = 0.3A$ ,  $I_{O5} = 0.1A$

### Pin Connection Diagram

(Front View)

