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## NTE7023 Integrated Circuit Module, 3 Output Positive Voltage Regulator for VCR

**Features:**

- 3 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
$V_{O1}, V_{O2}$ .....	30V
$V_{O3}$ .....	20V
Maximum Output Current, $I_O$ Max	
Average .....	1.0A
Peak (Note 1) .....	2.0A
Operating Case Temperature, $T_C$ Max .....	+105°C
Junction Temperature, $T_J$ Max .....	+150°C
Operating Temperature Range, $T_{opr}$ .....	0° to +85°C
Storage Temperature Range, $T_{stg}$ .....	-30° to +105°C
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	7.0°C/W

Note 1. Peak Current: For 0.1 sec Max.

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

Parameter	Test Conditions	$V_{O1}$	$V_{O2}$	$V_{O3}$	Unit
Output Voltage Setting	Condition 1, Note 2	12.0 ±0.3	12.0±0.1	5.3±0.1	V
Output Cutoff Residual Voltage	Condition 1, Note 3	0.1	0.1	5.3 ±0.13	V Max
Ripple Voltage	Condition 2	20	5	5	mV <sub>p-p</sub> Max
Temperature Coefficient	Condition 1	0.02	0.02	0.03	%/°C Max
Line Regulation	Condition 2	10	10	10	mV/V Max
	Condition 3	20	2	2	mV/V Max
Load Regulation	Condition 4	150	45	45	mV/A Max
Minimum Input-Output Voltage Difference	Condition 5	1.2	1.2	1.2	V Max

Note 2. Measurement must be made within 1 to 2 sec. after input switch is ON.

Note 3. When Pin10 is at High level (3V to 15V),  $V_{O1}$  is in OFFstate. When Pin10 is at Low level (0.6V or less),  $V_{O1}$  is in ON state.

**Test Conditions:**

- Condition 1:  $V_B = 45V$ , ripple  $6V_{PP}$   
 $V_{IN} (DC) 1 = 16V$ ,  $V_{IN} (DC) 2 = 8V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$  (input ripple  $1.5V_{PP}$ )
- Condition 2:  $V_B = 45V, \pm 6V$   
 $V_{IN} (DC) 1 = 16V$ ,  $V_{IN} (DC) 2 = 8V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$
- Condition 3:  $V_B = 45V$ ,  
 $V_{IN} (DC) 1 = 13.5V$  to  $20V$ ,  $V_{IN} (DC) 2 = 6.6V$  to  $10V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$
- Condition 4:  $V_B = 45V$ ,  
 $V_{IN} (DC) 1 = 16V$ ,  $V_{IN} (DC) 2 = 8V$ ,  $I_{O1} = 0.3A$  to  $1A$ ,  $I_{O2} = 0.1A$  to  $1A$ ,  $I_{O3} = 0.1A$  to  $1A$
- Condition 5:  $V_B = 45V$ ,  $I_{O1} = I_{O2} = I_{O3} = 0.5A$

**Pin Connection Diagram**  
(Front View)

