

NTE1880 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 |
| Maximum Average Output Current, I_O Max | |
| V_{O1} | 1.0A |
| V_{O2} | 1.0A |
| V_{O3} | 0.5A |
| Maximum Peak Output Current (Note 1), I_O Max | |
| V_{O1} | 2.5A |
| V_{O2} (Note 2) | 2.5A |
| V_{O3} | 0.5A |
| 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° to $+105^\circ\text{C}$ |
| Thermal Resistance, Junction-to-Case, R_{thJC} | 4.5°C/W |

Note 1. Peak Current: For 0.1sec Max.

Note 2. Must be used within the ASO range of external transistor Tr1.

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 | 13.0 ± 0.2 | 6.05 ± 0.2 | 5.1 ± 0.2 | V |
| Output Cutoff Residual Voltage | Condition 1, Note 3 | 0.1 | 6.02 ± 0.2 | 0.1 | V Max |
| Ripple Voltage | Condition 1 | 5 | 2 | 2 | mV_{p-p} Max |
| Temperature Coefficient | Condition 1 | 0.02 | 0.035 | 0.02 | $\% / ^\circ\text{C}$ Max |
| Input Regulation | Condition 2 | 9 | 10 | 10 | mV/V Max |
| | Condition 3 | 1 | 1 | 1 | |
| Load Regulation | Condition 4 | 35 | 10 | 3500 | mV/A Max |
| Minimum Input-Output Voltage Difference | Condition 5 | 1.2 | 1.2 | – | V Max |
| V_{O3} Short Current | Condition 6 | – | – | 0.45 | A Max |

Test Conditions:

- Condition 1: $V_B = 45V$, Ripple = $6mV_{p-p}$
 V_{IN} (DC) 1 = $18V$, $I_{O1} = 0.5A$, Input Ripple Voltage = $2.5V_{p-p}$,
 V_{IN} (DC) 2 = $14V$, $I_{O2} = 0.3A$, $I_{O3} = 70mA$, Input Ripple Voltage = $1.6V_{p-p}$
- Condition 2: $V_B = 45V \pm 7V$
 V_{IN} (DC) 1 = $18V$, $I_{O1} = 0.5A$
 V_{IN} (DC) 2 = $14V$, $I_{O2} = 0.3A$, $I_{O3} = 70mA$
- Condition 3: $V_B = 45V$
 V_{IN} (DC) 1 = $18V \pm 4V$, $I_{O1} = 0.5A$
 V_{IN} (DC) 2 = $14V \pm 3V$, $I_{O2} = 0.3A$, $I_{O3} = 70mA$
- Condition 4: $V_B = 45V$
 V_{IN} (DC) 1 = $18V$, $I_{O1} = 0$ to $1A$, $I_{O3} = 50$ to $100mA$
 V_{IN} (DC) 2 = $14V$, $I_{O2} = 0$ to $1A$
- Condition 5: $V_B = 45V$, $I_{O1} = I_{O2} = 1A$
- Condition 6: $V_B = 45V$
 V_{IN} (DC) 1 = $18V$, $I_{O1} = 0.5A$
 V_{IN} (DC) 2 = $14V$, $I_{O2} = 0.3A$

Pin Connection Diagram

(Front View)

