

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)

