



DC COMPONENTS CO., LTD.

INTEGRATED CIRCUIT

DE7824

DE7824A

TECHNICAL SPECIFICATIONS OF 3-TERMINAL POSITIVE VOLTAGE REGULATOR

Description

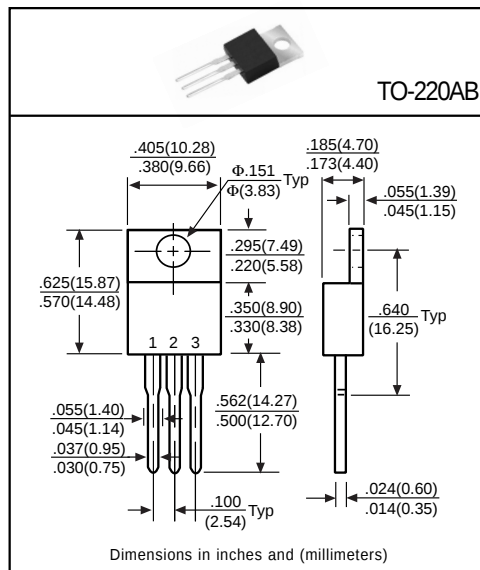
These regulators employ internal current limiting and thermal shutdown, making them essentially indestructible. They can deliver over 1A output current with adequate heatsinking. They are intended as fixed voltage regulators in a wide range of applications including local, on-card regulation for elimination of noise and distribution problems associated with single-point regulation.

Pinning

- 1 = Input
- 2 = Ground
- 3 = Output

Absolute Maximum Ratings (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Input Voltage	V _I	40	V
Total Power Dissipation	P _D	Internal limit	W
Operating Temperature Range	T _{opr}	0 to +125	°C
Maximum Junction Temperature	T _J	125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Lead Temperature(Soldering 10 Sec.)	T _L	230	°C



Electrical Characteristics

(V_{in}=33V, I_{out}=500mA, 0°C≤T_J≤125°C, unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Output Voltage	DE7824A	23.28	24.00	24.72	V	T _J =25°C P _D ≤15W, 5mA≤I _o ≤1A
	DE7824	23.00	24.00	25.00		
	DE7824A	23.28	24.00	24.72		
	DE7824	23.80	24.00	25.20		
Line Regulation	DE7824A	-	18	240	mV	T _J =25°C, 27V≤V _{in} ≤38V T _J =25°C, 30V≤V _{in} ≤36V
	DE7824	-	18	480		
	DE7824	-	6.0	240		
Load Regulation	DE7824A	-	-	240	mV	T _J =25°C, 5mA≤I _o ≤1.5A T _J =25°C, 250mA≤I _o ≤750mA
	DE7824	-	-	480		
	DE7824A	-	-	120		
	DE7824	-	-	240		
Input Bias Current	I _{IB}	-	5.5	8.0	mA	T _J =25°C, I _o ≤1A
Input Bias Current Change	ΔI _{IB}	-	-	0.5	mA	5mA≤I _o ≤1A
		-	-	1.3		27V≤V _{in} ≤38V
Output Noise Voltage	DE7824A	-	-	200	μV	T _A =25°C, 10Hz≤f≤100KHz
	DE7824	-	-	300		
Ripple Rejection	DE7824A	-	68	-	dB	28V≤V _{in} ≤38V, f=120Hz
	DE7824	62	73	-		
Dropout Voltage	DE7824A	-	2.0	-	V	T _J =25°C, I _o =1A
	DE7824	-	2.5	-		
Short Circuit Current	I _{SC}	-	1.5	-	A	T _J =25°C
Peak Output Current	I _{max}	1.7	-	-	A	T _J =25°C
Average T _c of V _{out}	ΔV _o / ΔT	-	-0.8	-	mV / °C	0°C≤T _J ≤+125°C, I _o =5mA