DC COMPONENTS CO., LTD.

INTEGRATED CIRCUIT

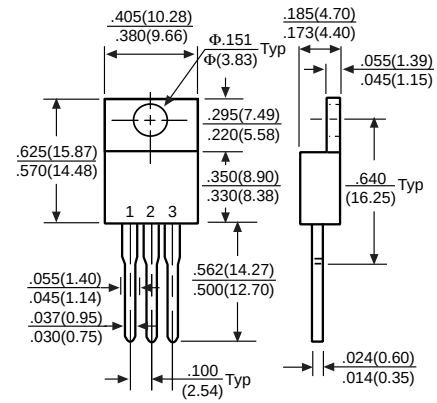
DE7824
DE7824A

TECHNICAL SPECIFICATIONS OF 3-TERMINAL POSITIVE VOLTAGE REGULATOR

Description

These regulators empoly 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.

TO-220AB



Dimensions in inches and (millimeters)

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	Topr	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	V_O	23.28	24.00	24.72	V	T_J=25°C
	DE7824		23.00	24.00	25.00		
	DE7824A		23.28	24.00	24.72		P_D≦15W, 5mA≦I_O≦1A
	DE7824		23.80	24.00	25.20		
Line Regulation	DE7824A	Reg_{line}	-	18	240	mV	T_J=25°C, 27V≦V_{in}≦38V
	DE7824		-	18	480		
			-	6.0	240		T_J=25°C, 30V≦V_{in}≦36V
Load Regulation	DE7824A	Reg_{load}	-	-	240	mV	T_J=25°C, 5mA≦I_O≦1.5A
	DE7824		-	-	480		
	DE7824A		-	-	120		T_J=25°C, 250mA≦I_O≦750mA
	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	V_n	-	-	200	μV	T_A=25°C, 10Hz≦f≦100KHz
	DE7824		-	-	300		
Ripple Rejection	DE7824A	RR	-	68	-	dB	28V≦V_{in}≦38V, f=120Hz
	DE7824		62	73	-		
Dropout Voltage	DE7824A	V_D	-	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		Imax	1.7	-	-	A	T_J=25°C
Average T_C of V_{out}		$\Delta V_O / \Delta T$	-	-0.8	-	mV / °C	0°C≦T_J≦+125°C, I_O=5mA