DC COMPONENTS CO., LTD.

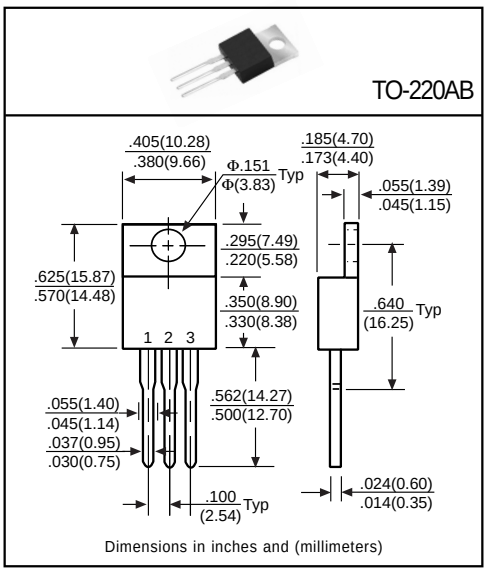
INTEGRATED CIRCUIT

DE7809
DE7809A

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.



Pinning

1 = Input
2 = Ground
3 = Output

Absolute Maximum Ratings (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Input Voltage	V_I	35	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}=15V, I_{out}=500mA, 0°C≦T_J≦125°C, unless otherwise specified)

Characteristic		Symbol	Min	Typ	Max	Unit	Test Conditions
Output Voltage	DE7809A	V_O	8.23	9.00	9.27	V	T_J=25°C
	DE7809		8.64	9.00	9.36		
	DE7809A		8.73	9.00	9.27		P_D≦15W, 5mA≦I_O≦1A
	DE7809		8.55	9.00	9.45		
Line Regulation	DE7809A	Reg_{line}	-	6.0	90	mV	T_J=25°C, 11.5V≦V_{in}≦25V
	DE7809		-	4.0	100		
	DE7809A		-	2.0	45		T_J=25°C, 12V≦V_{in}≦25V
	DE7809		-	2.0	50		
Load Regulation	DE7809A	Reg_{load}	-	-	100	mV	T_J=25°C, 5mA≦I_O≦1.5A
	DE7809		-	-	180		
	DE7809A		-	-	50		T_J=25°C, 250mA≦I_O≦750mA
	DE7809		-	-	90		
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		11.5V≦V_{in}≦26V
Output Noise Voltage	DE7809A	V_n	-	-	200	μV	T_A=25°C, 10Hz≦f≦100KHz
	DE7809		-	-	300		
Ripple Rejection	DE7809A	RR	-	68	-	dB	13V≦V_{in}≦23V, f=120Hz
	DE7809		62	73	-		
Dropout Voltage	DE7809A	V_D	-	2.0	-	V	T_J=25°C, I_O=1A
	DE7809		-	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