



# DC COMPONENTS CO., LTD.

## INTEGRATED CIRCUIT

DE7812  
DE7812A

### TECHNICAL SPECIFICATIONS OF 3-TERMINAL POSITIVE VOLTAGE REGULATOR

#### Description

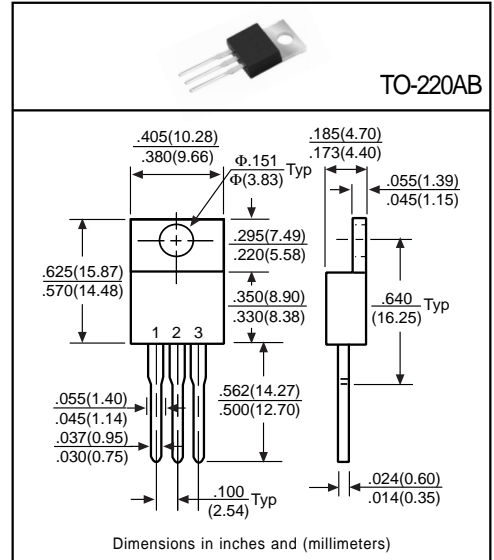
These regulators employ internal current limiting and thermal shutdown, making them essentially indestructible. They can deliver over 1A output current with adequate heatsinking. They are intended as fixed voltage regulators in a wide range of applications including local, on-card regulation for elimination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

#### Pinning

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

#### Absolute Maximum Ratings (T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Input Voltage	V <sub>I</sub>	35	V
Total Power Dissipation	P <sub>D</sub>	Internal limit	W
Operating Temperature Range	T <sub>opr</sub>	0 to +125	°C
Maximum Junction Temperature	T <sub>J</sub>	125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C
Lead Temperature(Soldering 10 Sec.)	T <sub>L</sub>	230	°C



#### Electrical Characteristics

(V<sub>in</sub>=19V, I<sub>out</sub>=500mA, 0°C ≤ T<sub>J</sub> ≤ 125°C, unless otherwise specified)

Characteristic		Symbol	Min	Typ	Max	Unit	Test Conditions	
Output Voltage	DE7812A	V <sub>O</sub>	11.64	12.00	12.36	V	T <sub>J</sub> =25°C	
	DE7812		11.50	12.00	12.50			
	DE7812A		11.64	12.00	12.36			
	DE7812		11.40	12.00	12.60			
Line Regulation	DE7812A	Reg <sub>line</sub>	-	20	120	mV	T <sub>J</sub> =25°C, 14.5V ≤ V <sub>in</sub> ≤ 30V	
	DE7812		-	44	240			
	DE7812A		-	16	60		T <sub>J</sub> =25°C, 16V ≤ V <sub>in</sub> ≤ 22V	
	DE7812		-	16	120			
Load Regulation	DE7812A	Reg <sub>load</sub>	-	-	120	mV	T <sub>J</sub> =25°C, 5mA ≤ I <sub>o</sub> ≤ 1.5A	
	DE7812		-	45	240			
	DE7812A		-	-	60		T <sub>J</sub> =25°C, 250mA ≤ I <sub>o</sub> ≤ 750mA	
	DE7812		-	16	120			
Input Bias Current		I <sub>IB</sub>	-	5.5	8.0	mA	T <sub>J</sub> =25°C, I <sub>o</sub> ≤ 1A	
Input Bias Current Change		ΔI <sub>IB</sub>	-	-	0.5	1.3	mA	5mA ≤ I <sub>o</sub> ≤ 1A 14.5V ≤ V <sub>in</sub> ≤ 30V
Output Noise Voltage	DE7812A	V <sub>n</sub>	-	-	200	μV	T <sub>A</sub> =25°C, 10Hz ≤ f ≤ 100KHz	
	DE7812		-	-	300			
Ripple Rejection	DE7812A	RR	-	68	-	dB	15V ≤ V <sub>in</sub> ≤ 25V, f=120Hz	
	DE7812		62	73	-			
Dropout Voltage	DE7812A	V <sub>D</sub>	-	2.0	-	V	T <sub>J</sub> =25°C, I <sub>o</sub> =1A	
	DE7812		-	2.5	-			
Short Circuit Current		I <sub>sc</sub>	-	1.5	-	A	T <sub>J</sub> =25°C	
Peak Output Current		I <sub>max</sub>	1.7	-	-	A	T <sub>J</sub> =25°C	
Average T <sub>c</sub> of V <sub>out</sub>		ΔV <sub>O</sub> / ΔT	-	-0.8	-	mV / °C	0°C ≤ T <sub>J</sub> ≤ +125°C, I <sub>o</sub> =5mA	