DC COMPONENTS CO., LTD.

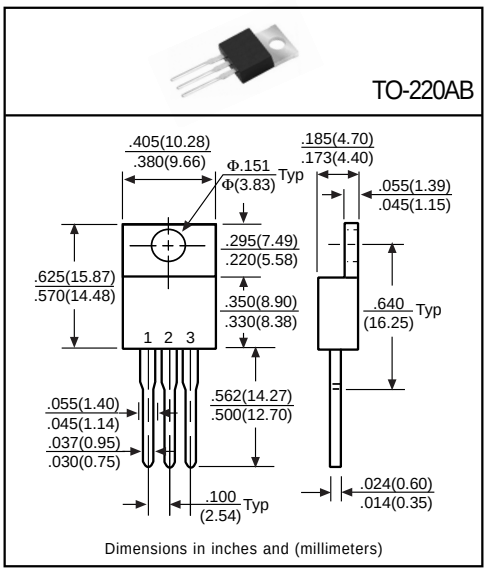
INTEGRATED CIRCUIT

DE7812
DE7812A

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}=19V, I_{out}=500mA, 0°C≦T_J≦125°C, unless otherwise specified)

Characteristic		Symbol	Min	Typ	Max	Unit	Test Conditions
Output Voltage	DE7812A	V_O	11.64	12.00	12.36	V	T_J=25°C
	DE7812		11.50	12.00	12.50		
	DE7812A		11.64	12.00	12.36		14.5V≦V_{in}≦27V
	DE7812		11.40	12.00	12.60		
Line Regulation	DE7812A	Reg_{line}	-	20	120	mV	T_J=25°C, 14.5V≦V_{in}≦30V
	DE7812		-	44	240		
	DE7812A		-	16	60		T_J=25°C, 16V≦V_{in}≦22V
	DE7812		-	16	120		
Load Regulation	DE7812A	Reg_{load}	-	-	120	mV	T_J=25°C, 5mA≦I_O≦1.5A
	DE7812		-	45	240		
	DE7812A		-	-	60		T_J=25°C, 250mA≦I_O≦750mA
	DE7812		-	16	120		
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		14.5V≦V_{in}≦30V
Output Noise Voltage	DE7812A	V_n	-	-	200	μV	T_A=25°C, 10Hz≦f≦100KHz
	DE7812		-	-	300		
Ripple Rejection	DE7812A	RR	-	68	-	dB	15V≦V_{in}≦25V, f=120Hz
	DE7812		62	73	-		
Dropout Voltage	DE7812A	V_D	-	2.0	-	V	T_J=25°C, I_O=1A
	DE7812		-	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

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