



DC COMPONENTS CO., LTD.

INTEGRATED CIRCUIT

DE7818
DE7818A

TECHNICAL SPECIFICATIONS OF 3-TERMINAL POSITIVE VOLTAGE REGULATOR

Description

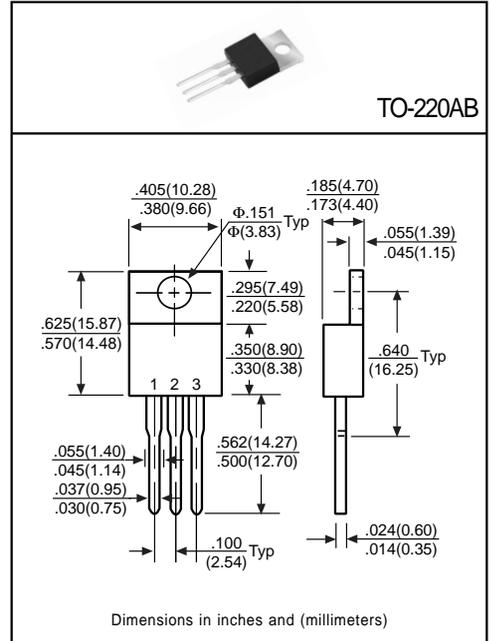
These regulators employ internal current limiting and thermal shutdown, making them essentially indestructible. They can deliver over 1A output current with adequate heatsinking. They are intended as fixed voltage regulators in a wide range of applications including local, on-card regulation for elimination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

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Input Voltage	V_i	35	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

($V_{in}=27V$, $I_{out}=500mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$, unless otherwise specified)

Characteristic		Symbol	Min	Typ	Max	Unit	Test Conditions
Output Voltage	DE7818A	V_o	17.46	18.00	18.54	V	$T_j=25^{\circ}C$ $P_D \leq 15W$, $5mA \leq I_o \leq 1A$
	DE7818		17.28	18.00	18.72		
	DE7818A		17.46	18.00	18.54		
	DE7818		17.10	18.00	18.90		
Line Regulation		Reg_{line}	-	15	360	mV	$T_j=25^{\circ}C$, $21V \leq V_{in} \leq 33V$
			-	-	180		$T_j=25^{\circ}C$, $24V \leq V_{in} \leq 30V$
Load Regulation		Reg_{load}	-	-	360	mV	$T_j=25^{\circ}C$, $5mA \leq I_o \leq 1.5A$
			-	5.0	180		$T_j=25^{\circ}C$, $250mA \leq I_o \leq 750mA$
Input Bias Current		I_{ib}	-	5.5	8.0	mA	$T_j=25^{\circ}C$, $I_o \leq 1A$
Input Bias Current Change		ΔI_{ib}	-	-	0.5	mA	$5mA \leq I_o \leq 1A$
			-	-	1.3		$21V \leq V_{in} \leq 33V$
Output Noise Voltage		V_n	-	-	110	μV	$T_A=25^{\circ}C$, $10Hz \leq f \leq 100KHz$
Ripple Rejection		RR	53	69	-	dB	$28V \leq V_{in} \leq 38V$, $f=120Hz$
Dropout Voltage	DE7818A	V_D	-	2.0	-	V	$T_j=25^{\circ}C$, $I_o=1A$
	DE7818		-	2.5	-		
Short Circuit Current		I_{sc}	-	1.5	-	A	$T_j=25^{\circ}C$
Peak Output Current		I_{max}	1.7	-	-	A	$T_j=25^{\circ}C$
Average T_c of V_{out}		$\Delta V_o / \Delta T$	-	-1.0	-	$mV / ^{\circ}C$	$0^{\circ}C \leq T_j \leq +125^{\circ}C$, $I_o=5mA$