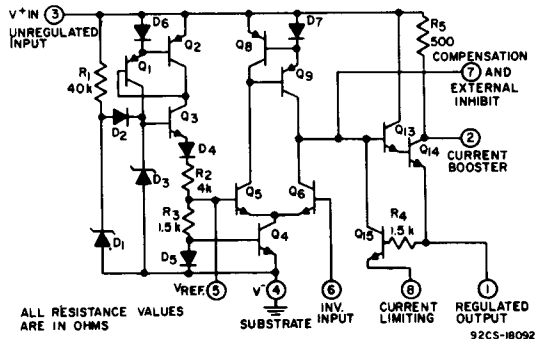


CA3085/..., CA3085A/..., CA3085B/...

High-Reliability Positive Voltage Regulators

For Regulated Voltages from 1.7 V to 46 V at Currents up to 100 mA

The CA3085, CA3085A, and CA3085B Slash (/) Series type are supplied in the 8-lead TO-5 style package.



Schematic diagram of CA3085 Series.

TABLE A. POST BURN-IN, FINAL ELECTRICAL AND GROUP A SAMPLING TESTS

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS FOR INDICATED TEMPERATURES (°C)						UNITS
			MINIMUM			MAXIMUM			
			-55	+25	+125	-55	+25	+125	
Reference Voltage	VREF		1.3	1.4	1.4	1.8	1.8	1.9	V
Output Voltage	VO	V ⁺ _{IN} = 7.5 V, or 30 V				1.9	1.7	1.7	V
			Minimum Value						
Maximum Value	VO(max)	V ⁺ _{IN} = 30 V, CA3085	25	26	24	—	—	—	V
		V ⁺ _{IN} = 40 V, CA3085A	35	36	34	—	—	—	V
		V ⁺ _{IN} = 60 V, CA3085B	45	46	44	—	—	—	V
Limiting Current	I _{LM}	V ⁺ _{IN} = 7.5 V, R _{SCF} = 7Ω R _L = 10Ω	—	—	—	—	120	—	mA
Output Drift Voltage			—	16	—	—	22	—	V
Load Regulation		I _L = 1 to 100 mA CA3085A	—	—	—	0.75	0.15	0.75	%/V _{OUT}
		R _{SCF} = 0 CA3085B	—	—	—	0.75	0.15	0.75	%/V _{OUT}
		I _L = 1 to 12 mA CA3085	—	—	—	0.15	0.10	0.15	%/V _{OUT}
Line Regulation		I _L = 1 mA CA3085	—	—	—	0.2	0.1	0.2	%/V
		R _{SCF} = 0 CA3085A	—	—	—	0.15	0.075	0.15	%/V
		CA3085B	—	—	—	0.12	0.04	0.12	%/V

Type	V _{IN} Range V	V _{OUT} Range V	Max. I _{OUT} mA	Max. Load Regulation % V _{OUT}
CA3085	7.5 to 30	1.8 to 26	12*	0.1
CA3085A	7.5 to 40	1.7 to 36	100	0.15
CA3085B	7.5 to 50	1.7 to 46	100	0.15

*This value may be extended to 100mA; however, regulation is not specified beyond 12mA.

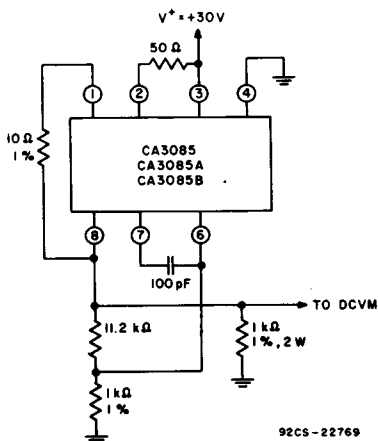
CA3085/..., CA3085A/..., CA3085B/...

TABLE B. DELTA LIMITS at $T_A = 25^\circ\text{C}$ (1 only)

CHARACTERISTIC	SYMBOL	TEST CONDITIONS $T_A = 25^\circ\text{C}$	LIMITS	UNITS
			MAX. Δ	
Reference Voltage	V_{REF}		± 0.05	V
Output Voltage	Minimum Value $V_{O(\min)}$	$V^+_{IN} = 7.5\text{ V}$ or 30 V	± 0.1	V
	Maximum Value $V_{O(\max)}$	$V^+_{IN} = 30\text{ V}$	± 0.5	V
Limiting Current	I_{LIM}	$V^+_{IN} = 7.5\text{ V}$, $R_{SCP} = 7\Omega$ $R_L = 10\Omega$	± 10	mA
Output Drift Voltage			± 0.5	V

TABLE C. GROUPS C AND D END-POINT TESTS at $T_A = 25^\circ\text{C}$

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	LIMITS		UNITS
			MIN.	MAX.	
Reference Voltage	V_{REF}		1.4	1.8	V
Minimum Output Voltage	$V_{O(\min)}$	$V^+_{IN} = 30\text{ V}$, CA3085	—	1.9	V
		$V^+_{IN} = 40\text{ V}$, CA3085A	—	1.9	V
		$V^+_{IN} = 50\text{ V}$, CA3085B	—	2.0	V
Load Regulation		$I_L = 1$ to 100 mA CA3085A	—	0.3	%V _{OUT}
		$R_{SCP} = 0$ CA3085B	—	0.3	
		$I_L = 1$ to 12 mA CA3085	—	0.2	
Line Regulation		$I_L = 1\text{ mA}$ CA3085	—	0.25	%V
		CA3085A	—	0.1	
		CA3085B	—	0.05	



Burn-in and operating life-test circuit.