

0.5A / 5V AC-DC LOW POWER VOLTAGE REGULATOR

FEATURES

- Input voltage range: 7 V to 13 V DC
- Output voltage 5 V with 1.7% tolerance
- Output ripple less than 30 mV for load resistor 10 Ω
- Maximum output current: 0.5 A
- PCB size: 48 mm x 60 mm
- Environmental specifications: temperature range of -10°C to 50°C ambient

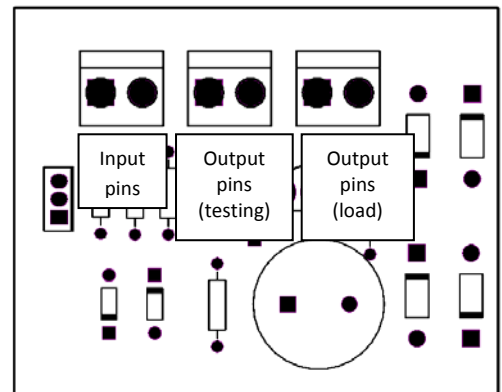


ABSOLUTE MAXIMUM RATINGS

Input voltage	20 V
Temperature	70°C
Internal power dissipation	2 W

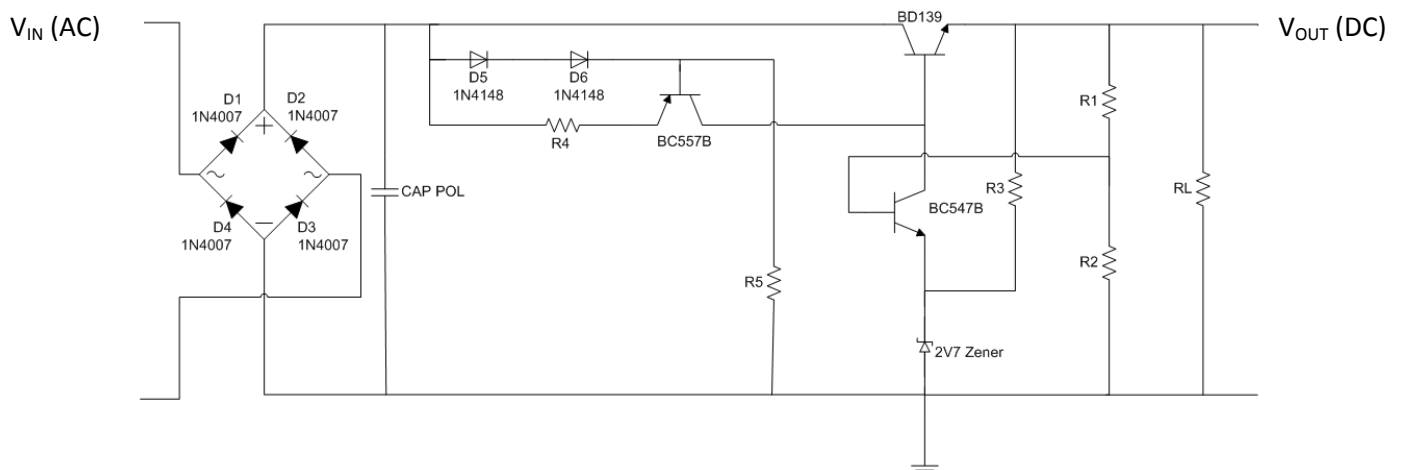
ELECTRICAL CHARACTERISTICS

$T_j = -55$ to 150°C , $V_i = 7$ to 13 V, $I_o = 496$ mA; unless otherwise specified

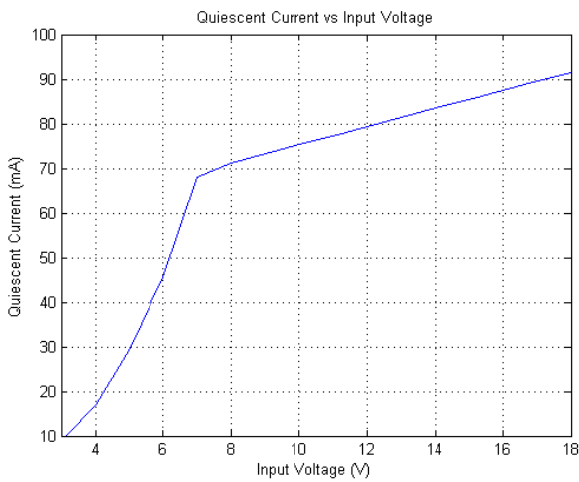
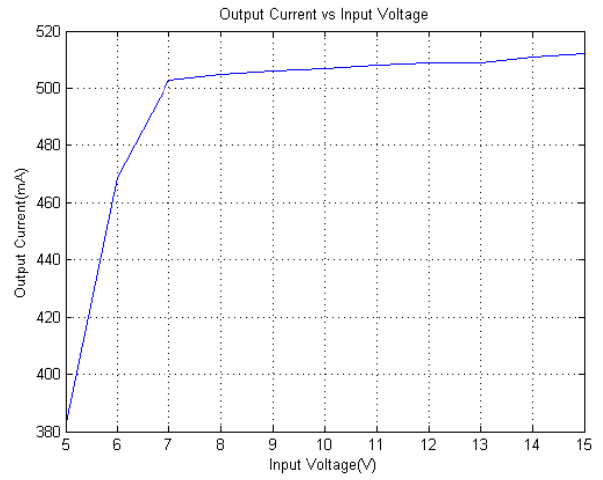
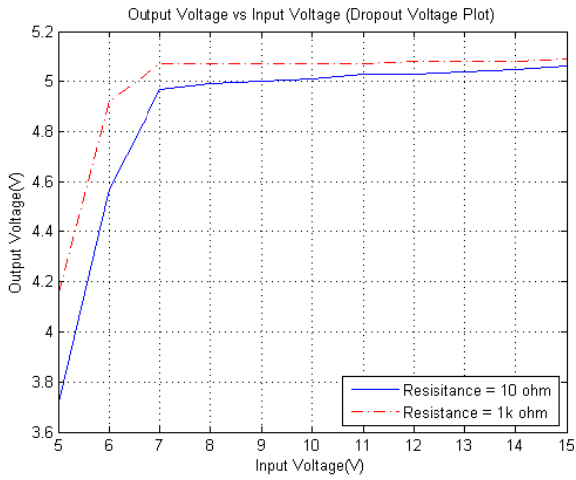


SYMBOL	PARAMETER	REGULATOR			UNIT
		MIN	TYP	MAX	
V_o	Output voltage	5.028	5	5.084	V
$\Delta V_o / \Delta V_i$	Line regulation		9.3		mV
ΔV_o	Load regulation ($I_o = 5\text{mA}$ to 496mA)		16		mV
I_b	Quiescent current	70	73	79	mA
ΔI_b	Quiescent current change		9		mA
V_D	Dropout voltage		1.66		V
$\Delta V_o / \Delta T$	Output voltage drift		3.3		mV/°C
SVR	Supply voltage rejection			40.6	dB
R_i	Input resistance	100	137	165	Ω
R_o	Output resistance		12.6		m Ω

SCHEMATIC DIAGRAM



TYPICAL OPERATING CHARACTERISTICS



TRANSIENT RESPONSE

