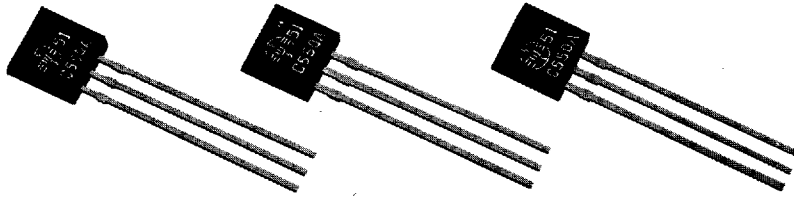




低電圧制御用 / 3-Terminal Stabilized 3端子形安定化電源 / Power Supply Monolithic IC LVC550 Series



LVC550 シリーズは、従来の3端子型安定化電源に比し、最小入出力電圧差を0.2V Typ. と小さくし、かつ無負荷入力電流を30 μ A Typ. と低消費電流化した安定化電源で、電池使用のポータブル機器に使用すると電池の利用効率の向上と低消費電流で、電池寿命が大きく伸びます。

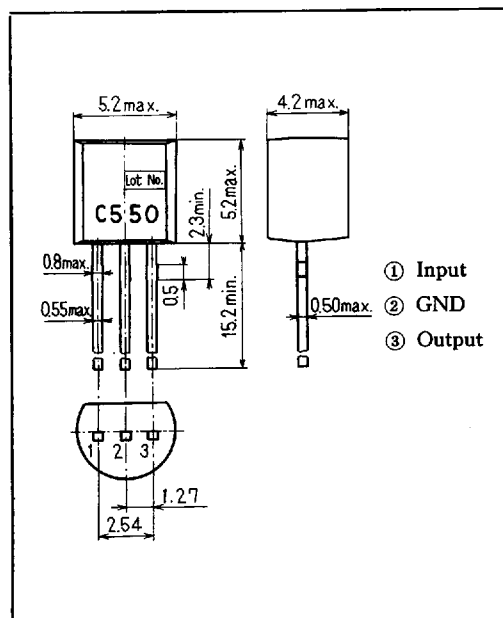
■特長

- (1) 最小入出力電圧 0.2V Typ.
- (2) 出力電圧温度係数 $\pm 0.01\%/^{\circ}\text{C}$ Typ.
- (3) 無負荷時入力電流 50 μ A Max.
- (4) パッケージ TO-92

■用途

- (1) ハンドヘルドコンピューター
- (2) ハンディトランシーバー
- (3) コードレステレフォン
- (4) その他、電池使用ポータブル機器
(特に、CMOS使用機器)

■外形図/DIMENSIONS



In comparison with the conventional 3-terminal stabilized power supplies, the LVC550 Series comprises low current-consumption power supplies with the minimum input-output voltage difference limited to low 0.2V typical and the no-load input current consumption limited to 30 μ A typical. When used for battery-operated portable equipment, the battery life will be greatly prolonged because of higher battery utilization rate and lower current consumption.

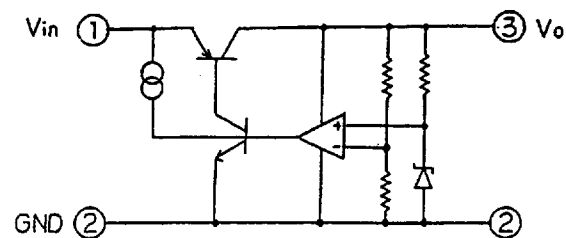
■FEATURES

- (1) Minimum input-output voltage : 0.2V Typ.
- (2) Output voltage temperature coefficient : $\pm 0.01\%/^{\circ}\text{C}$ Typ.
- (3) No-load input current : 50 μ A max.
- (4) Package : TO-92

■APPLICATIONS

- (1) For hand-held computers.
- (2) For handy transceivers (citizen's band radios).
- (3) For cordless telephones.
- (4) For others such as battery-operated portable equipment (especially for CMOS using equipment).

■等価回路/EQUIVALENT CIRCUIT





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T-58-1123

■最大定格/MAXIMUM RATING

(Ta=25°C)

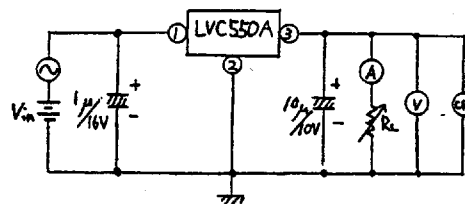
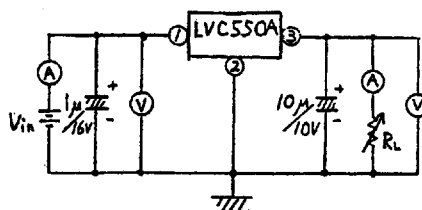
項目/Item	記号/Symbol	定格/Rating	単位/Unit
動作温度 Operating Temperature	Topr	-20~+75	°C
保存温度 Storage Temperature	Tstg	-30~+125	°C
入力電圧 Input Voltage	Vin	-0.3~15	V
ドライブ電流 Drive Current	ID	100	mA
消費電力 Power Dissipation	PD	300	mW

■電気的特性/ELECTRICAL CHARACTERISTICS of 550A

(Ta=25°C)

項目 Item	記号 Symbol	測定条件 Measuring Conditions	最小 Min.	標準 Typ.	最大 Max.	単位 Unit
出力電圧 Output Voltage	Vo	Vin=6.0 Io=25mA	2.85	3.00	3.15	V
無負荷入力電流 No Load Input Current	Iio	Vin=6.0V Io=0mA		30	50	μA
入力変動率 Input Regulation	ΔV1	Vi=3.45V~8.0V Io=30mA		±0.15		%/V
負荷変動率 Load Regulation	ΔV2	Vi=6.0V Io=0~50mA		±0.05		%/mA
出力電圧温度係数 Output Voltage Temperature Coefficient	ΔV3	Vi=6.0V Io=25mA Ta=-20~+75°C		±0.02		%/°C
リップル除去率 Ripple Rejection	RR	4V < Vin < 8V Io=25mA f=120Hz	45	55		dB

■測定回路/MEASURING CIRCUIT



A : 直流電流計
V : 直流電圧計
CRT : オシロスコープ

使用コンデンサ : タンタル電解コンデンサ

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T-58-11-23

モノリシック IC

電氣的特性/ELECTRICAL CHARACTERISTICS of LVC550B

(Ta=25°C)

項目 Item	記号 Symbol	測定条件 Measuring Conditions	最小 Min.	標準 Typ.	最大 Max.	単位 Unit
出力電圧 Output Voltage	V _o	V _{in} =7.0V I _o =25mA	3.8	4.0	4.2	V
無負荷入力電流 No Load Input Current	I _{io}	V _{in} =7.0V I _o =0mA		30	50	μA
入力変動率 Input Regulation	ΔV ₁	V _{in} =4.5V~9.0V I _o =30mA		±0.05		%/V
負荷変動率 Load Regulation	ΔV ₂	V _{in} =7.0V I _o =0~50mA		±0.05		%/mA
出力電圧温度係数 Output Voltage Temperature Coefficient	ΔV ₃	V _{in} =7.0V I _o =25mA Ta=-20~+75°C		±0.02		%/°C
リップル除去率 Ripple Rejection	RR	5V <V _{in} <9V I _o =25mA f=120Hz	45	55		dB

電氣的特性/ELECTRICAL CHARACTERISTICS of LVC550C

(Ta=25°C)

項目 Item	記号 Symbol	測定条件 Measuring Conditions	最小 Min.	標準 Typ.	最大 Max.	単位 Unit
出力電圧 Output Voltage	V _o	V _{in} =8.0V I _o =25mA	4.8	5.0	5.2	V
無負荷入力電流 No Load Input Current	I _{io}	V _{in} =8.0V I _o =0mA		30	50	μA
入力変動率 Input Regulation	Δ1	V _{in} =5.5~10V I _o =30mA		±0.05		%/V
負荷変動率 Load Regulation	Δ2	V ₁ =8.0V I _o =0~50mA		±0.05		%/A
出力電圧温度係数 Output Voltage Temperature Coefficient	Δ3	V _{in} =8.0V I _o =25mA Ta=-20~+75°C		±0.01		%/°C
リップル除去率 Ripple Rejection	RR	6V <V _{in} <10V I _o =25mA f=120Hz	45	55		dB



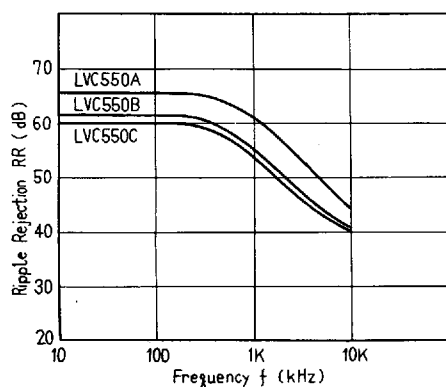
MONOLITHIC IC

MITSUMI

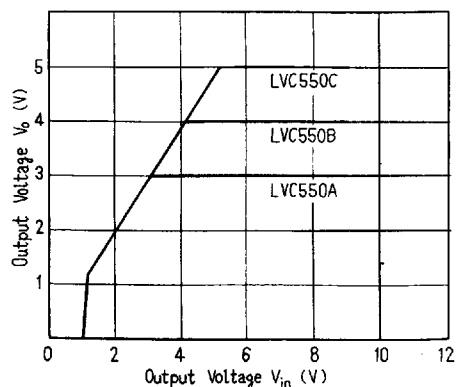
T-58-11-23

特性/CHARACTERISTICS

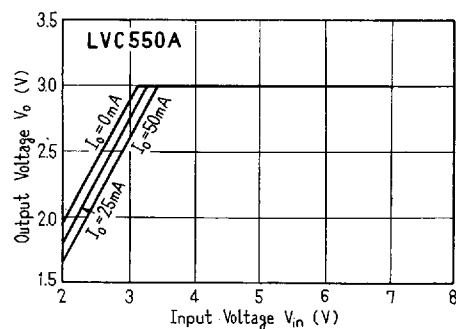
リップル特性/Ripple Charac.



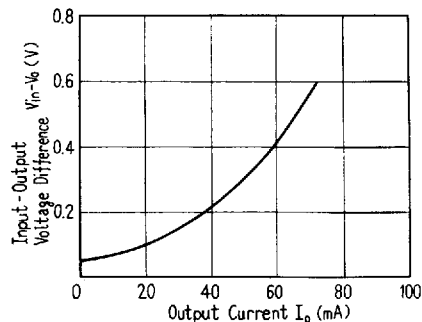
出力電圧特性/Output Voltage Charac.



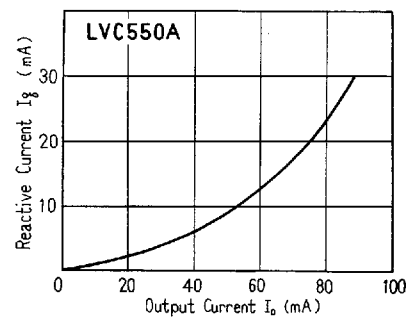
出力電圧特性/Output Voltage Charac.



入出力間電圧差特性/Input Output Charac.



負荷時無効電流/Reactive Current Charac. at No Load.



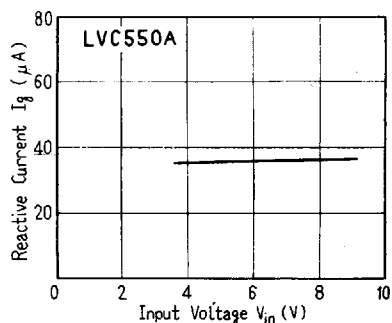
MITSUMI

T-58-11-23

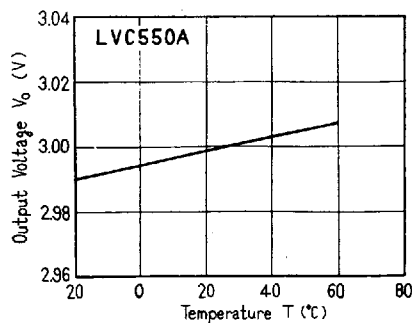
モノリシック IC



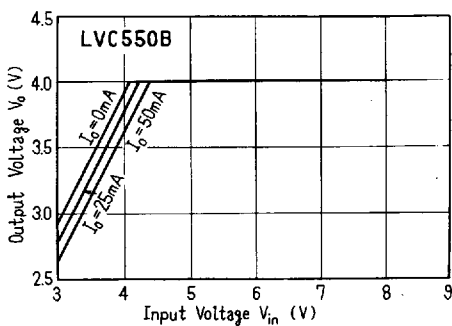
■無負荷時無効電流/Reactive Current at No Load.



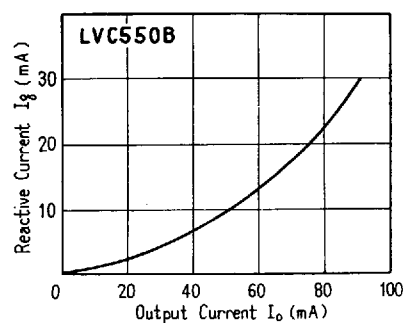
■温度特性/Temperature Charac.



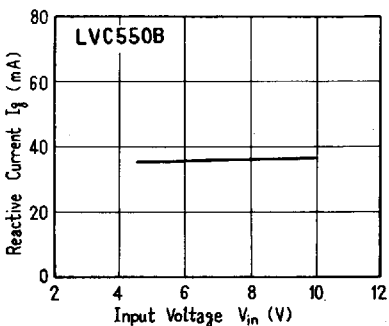
■出力電圧特性/Output Voltage Charac.



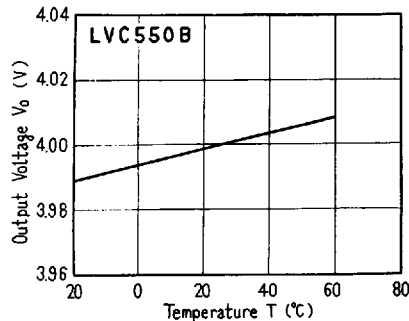
■無負荷時無効電流/Reactive Current at No Load.



■無負荷時無効電流/Reactive Current at No Load.



■温度特性/Temperature Charac.



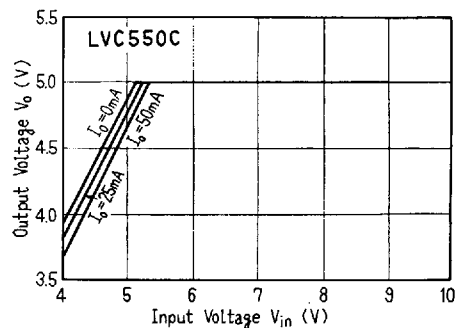


MONOLITHIC IC

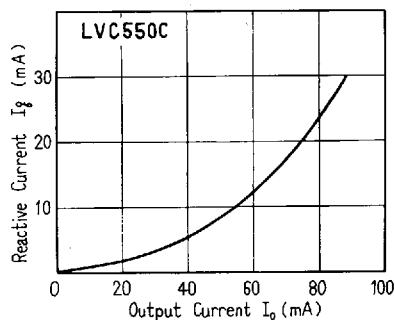
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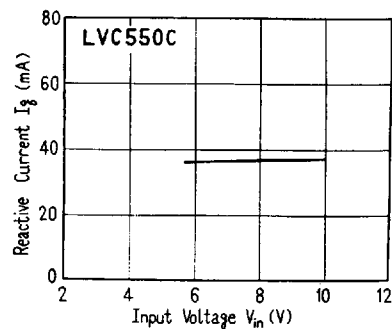
■出力電圧特性/Output Voltage Charac.



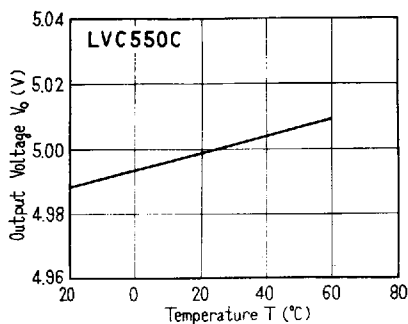
■負荷時無効電流/Reactive Current at Load.



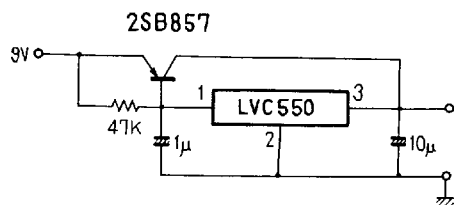
■無負荷時無効電流/Reactive Current at No Load.



■温度特性/Temperature Charac.



■応用回路例/APPLIED CIRCUIT EXAMPLE



■パワーTR外付の負荷特性/Load Charac. with Power TR.

