Adjustable / fixed negative LDO regulator IC
可変/固定負出力低飽和レギュレータIC

TK72100CS-G,TK721xxCS-G,TK722xxCS-G

DESCRIPTION

The TK72100CS-G, TK721xxCS-G and TK722xxCS-G are low dropout linear regulator ICs with on/off control, which can supply 150mA load current.
The output voltage of the TK72100CS-G, adjustable by external resistors, is available from -3.0 to -17.5V. Trimmed with high accuracy, The output voltage of the TK721xxCS-G is available from -2.0 to -9.5V and that of the TK722xxCS-G is available from -2.0 to -9.5V.

TK72100CS-G, TK721xxCS-G, TK722xxCS-Gは、出力電流150mAを安定に供給できるon/offコントロール付低飽和レギュレータICです。TK721xxCS-GとTK722xxCS-Gの出力電圧は内部固定で高精度にトリミングされ、TK721xxCS-Gは-2.0Vより-9.5V、TK722xxCS-Gは-2.0Vより-9.5Vの間で設定できます。またTK72100CS-Gの出力電圧は外部抵抗により-3.0Vより-17.5Vの間で自由に設定できます。

FEATURES

- Adjustable Negative Output Voltage(TK72100CS)
- High Precision Output Voltage of ±2.0% or ±60mV(TK721xxCS/TK722xxCS)
- Active Low On/off Control
- Active High On/off Control
- Short Circuit Protection (Over Current Protection)
- Thermal Shutdown (Over Heat Protection)

- 可変負出力電圧(TK72100CS)
- 高精度出力電圧: ±2.0% or ±60mV(TK721xxCS/TK722xxCS)
- 出力on/offコントロール: High-Off(TK72100CS/TK721xxCS)
- 出力on/offコントロール: High-On(TK722xxCS)
- 短絡保護機能(過電流保護)
- サーマルシャットダウン機能(過熱保護)

APPLICATIONS

- Battery Powered Systems
- DSC(Digital Still Camera)
- CCD(Coupled Charge Device) Bias
- GaAs Bias

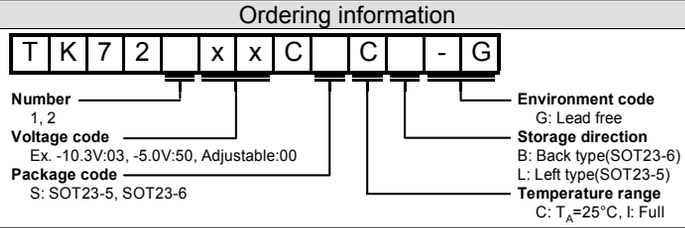
- バッテリー駆動機器
- デジタルスチルカメラ
- CCDバイアス
- GaAsバイアス

PACKAGE OUTLINE

Part name	Package	Marking	Pin configuration
TK72100CS-G	SOT23-6	K00	See next page
TK721xxCS-G	SOT23-5	Kxx	
TK722xxCS-G	SOT23-5	Txx	

ORDERING INFORMATION

Ordering information



* “xx” means voltage code. “xx”は電圧コードを示しています。

ABSOLUTE MAXIMUM RATINGS

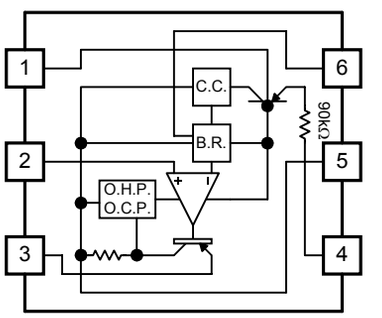
Parameter 項目	Symbol 記号	Rating 定格	Unit 単位	Remarks 備考
Operating Voltage Range 動作電圧範囲	V_{OP}	-19	V	
Operating Temperature Range 動作温度範囲	T_{OP}	-40 to +85	°C	
Power Dissipation 許容消費電力	P_D	500	mW	

ELECTRICAL CHARCTERISTICS

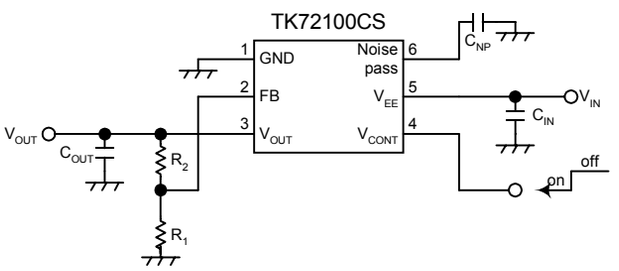
TK72100CS: V_{IN}=-9.5V, V_{OUT}=-8.0V, T_A=25°C, TK721xxCS, TK722xxCS: V_{IN}=$V_{OUT.TYP}$-1.5V, T_A=25°C

Parameter 項目	Symbol 記号	Value MIN	Value TYP	Value MAX	Units 単位	Conditions 条件	
Dropout Voltage 入出力間電圧降下	V_{DROP}		290	500	mV	I_{OUT}=50mA	
Maximum Output Current 最大出力電流	$I_{OUT.MAX}$	200	300		mA	When V_{OUT} down 10%	
Quiescent Current 電源電流	I_Q		170	250	μA	TK72100CS	I_{OUT}=0mA
			155	250		TK721xxCs/TK722xxCS	
Standby Current スタンバイ電流	I_{STB}		30	60	μA	TK72100CS	V_{OUT} off state
			20	60		TK721xxCs/TK722xxCS	
Control Current コントロール電流	I_{CONT}		12	30	μA	V_{CONT}=+1.8V	
Control Voltage コントロール電圧	V_{CONT}	0.0		0.3	V	V_{OUT} on state: TK72100CS, TK721xxCS	
		1.5		5.0		V_{OUT} off state: TK72100CS, TK721xxCS	
		1.3				V_{OUT} on state: TK722xxCS	
				0.3		V_{OUT} off state: TK722xxCS	

BLOCK DIAGRAM

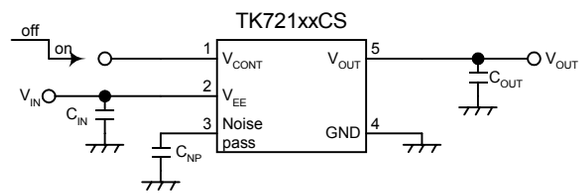


■ TK72100CS

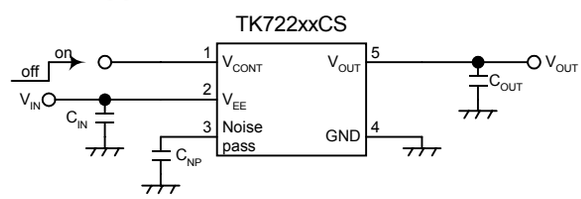


V_{OUT}=V_{FB}×{(R_1+R_2}/R_1}, $V_{FB.TYP}$=-1.20V

■ TK721xxCS



■ TK722xxCS



* C.C….Control Circuit, O.H.P…Over Heat Protection, O.C.P…Over Current Protection, B.G….Band gap Reference