

SANYO**STK5471**

Thick Film Hybrid IC

Voltage Regulator for VTR

TENTATIVE

Case Outline : 10 pins (See attached case outline drawing.)

Functions : Series regulator

Applications : Voltage regulator for VTR

Features : 3 outputs, output cutoff function

Maximum Ratings at $T_a = 25^\circ\text{C}$

		Vo1	Vo2	Vo3	unit	
Storage Temperature	T_{stg}	→	→	-30 to +105	$^\circ\text{C}$	
Operating Case Temperature	$T_c \text{ max}$	→	→	105	$^\circ\text{C}$	
Maximum DC Input Voltage	$V_{in}(\text{DC}) \text{ max}$	30	30	20	V	
Maximum Output Current*2	$I_o \text{ max}$	Average	1.5	1.5	0.5	A
		Peak	2.5	2.5	0.5	A
Junction Temperature	$T_j \text{ max}$	→	→	150	$^\circ\text{C}$	
Thermal Resistance	θ_{j-c}	4.5	4.5	10	$^\circ\text{C/W}$	

Electrical Characteristics at $T_a = 25^\circ\text{C}$

	Condition	Vo1	Vo2	Vo3	unit
Output Voltage Setting*1	①	12.0 ± 0.3	12.0 ± 0.1	5.3 ± 0.1	V
Ripple Voltage	②	20	5	5	mVp-p max
Output Cutoff Function	3V or greater	ON			
	0.6V or less	OFF	Without	Without	With
Temperature Coefficient	③	→	→	0.02	$\% / ^\circ\text{C max}$
Line Regulation	④	80	35	5	mV/V max
Load Regulation	⑤	150	40	100	mV/A max
Minimum Input-Output Voltage Difference	⑥	1.5	1.5	2.7	V max

Condition ① : $V_{in}(\text{DC})1 = 16\text{V}$, $V_{in}(\text{DC})2 = 9\text{V}$, $I_{o1} = I_{o2} = 1\text{A}$, $I_{o3} = 0.5\text{A}$, ($I_{B1} = I_{B2} = 2\text{mA}$)Condition ② : $V_{in}(\text{DC})1 = 16\text{V}$, $V_{in}(\text{DC})2 = 9\text{V}$, $I_{o1} = I_{o2} = 1\text{A}$, $I_{o3} = 0.5\text{A}$, input ripple voltage = 1.5Vp-pCondition ③ : $V_{in}(\text{DC})1 = 14.5\text{V}$ to 22V, $V_{in}(\text{DC})2 = 8.1\text{V}$ to 11V, $I_{o1} = I_{o2} = 1\text{A}$, $I_{o3} = 0.5\text{A}$ Condition ④ : $V_{in}(\text{DC})1 = 16\text{V}$, $V_{in}(\text{DC})2 = 9\text{V}$, $I_{o1} = 0.3\text{A}$ to 1A, $I_{o2} = 0.1\text{A}$ to 1A, $I_{o3} = 0.1\text{A}$ to 0.5ACondition ⑤ : $I_{o1} = I_{o2} = 1\text{A}$, $I_{o3} = 0.5\text{A}$, $I_{B1} = I_{B2} = 2\text{mA}$

*1. Measurement must be made within 1 to 2sec. after input switch ON in the STK5471 Test Circuit.

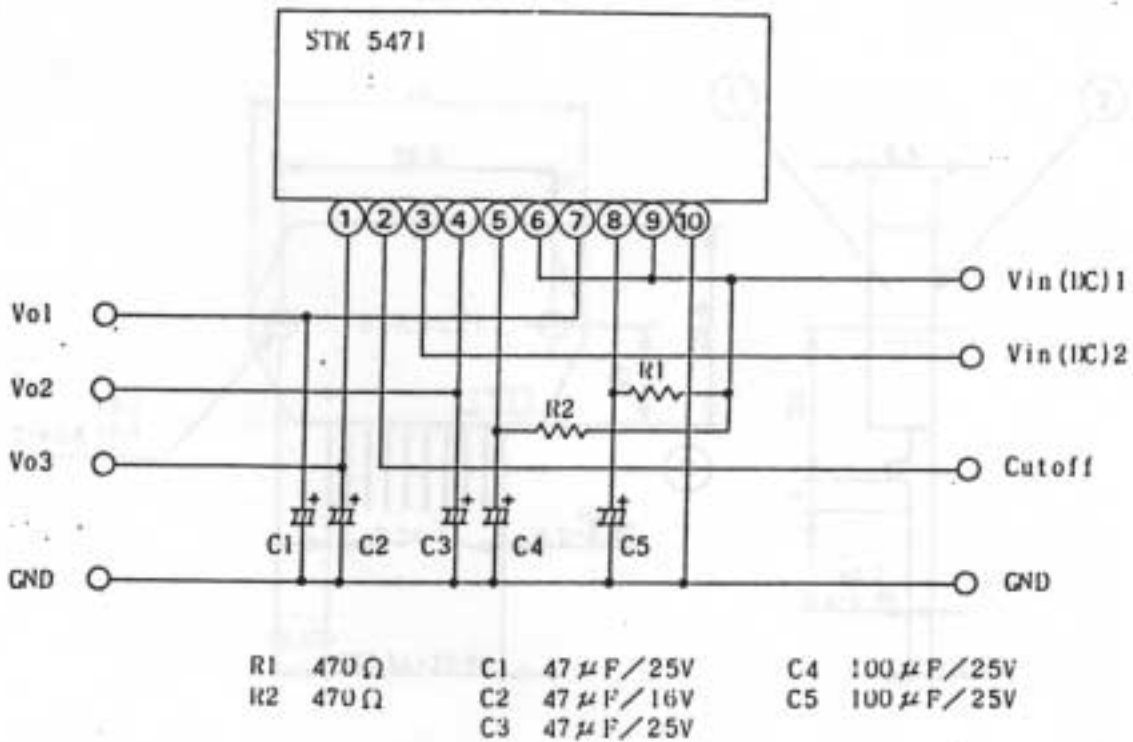
*2. Peak current : For 1.0sec. max ($V_{in}(\text{DC})1 = 15.7\text{V}$, $V_{in}(\text{DC})2 = 9\text{V}$)

Specifications and information herein are subject to change without notice.

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STK5471 Test Circuit



STK5471 Internal Equivalent Circuit

