

■Electrical Characteristics 2 (High Input Voltage Type)

Parameter		Symbol	Ratings						Unit
			SI-3010KD (Variable type)			SI-3050KD			
			min.	typ.	max.	min.	typ.	max.	
Input Voltage		V _{IN}	2.4 ^{*1}		27 ^{*5}	^{*1}		15 ^{*5}	V
Output Voltage (Reference Voltage V _{ADJ} for SI-3010KD)		V _O (V _{ADJ})	0.98	1.00	1.02	4.90	5.00	5.10	V
		Conditions	V _{IN} =7V, I _O =10mA			V _{IN} =7V, I _O =10mA			
Line Regulation		ΔV _{OLINE}			30			30	mV
		Conditions	V _{IN} =6 to 11V, I _O =10mA (V _O =5V)			V _{IN} =6 to 11V, I _O =10mA			
Load Regulation		ΔV _{OLOAD}			75			75	mV
		Conditions	V _{IN} =7V, I _O =0 to 1A (V _O =5V)			V _{IN} =7V, I _O =0 to 1A			
Dropout Voltage		V _{DIF}			0.3			0.3	V
		Conditions	I _O =0.5A (V _O =5V)			I _O =0.5A			
					0.6			0.6	
		Conditions	I _O =1A (V _O =5V)			I _O =1A			
Quiescent Circuit Current		I _q			600			600	μA
		Conditions	V _{IN} =7V, I _O =0A, V _C =2V R ₂ =10kΩ			V _{IN} =7V, I _O =0A, V _C =2V			
Circuit Current at Output OFF		I _q (OFF)			1			1	μA
		Conditions	V _{IN} =7V, V _C =0V			V _{IN} =7V, V _C =0V			
Temperature Coefficient of Output Voltage		ΔV _O /ΔT _a		±0.5			±0.5		mV/°C
		Conditions	T _J =0 to 100°C (V _O =5V)			T _J =0 to 100°C			
Ripple Rejection		R _{REJ}		75			75		dB
		Conditions	V _{IN} =7V, f=100 to 120Hz, I _O =0.1A (V _O =5V)			V _{IN} =7V, f=100 to 120Hz, I _O =0.1A			
Overcurrent Protection Starting Current ^{*2} ^{*4}		I _{S1}	1.1			1.1			A
		Conditions	V _{IN} =7V			V _{IN} =7V			
V _C Terminal	Control Voltage (Output ON) ^{*3}	V _C , I _H	2.0			2.0			V
	Control Voltage (Output OFF) ^{*3}	V _C , I _L			0.8			0.8	
	Control Current (Output ON)	I _C , I _H			40			40	μA
		Conditions	V _C =2V			V _C =2V			
	Control Current (Output OFF)	I _C , I _L	-5	0		-5	0		μA
	Conditions	V _C =0V			V _C =0V				
Input Overvoltage Shutdown Voltage		V _{OVP}	33			26			V
		Conditions	I _O =10mA			I _O =10mA			

*1: Refer to the Dropout Voltage parameter.

*2: I_{S1} is specified at the 5% drop point of output voltage V_O under the condition of Output Voltage parameter.

*3: Output is OFF when the output control terminal (V_C terminal) is open. Each input level is equivalent to LS-TTL level. Therefore, the device can be driven directly by LS-TTLs.

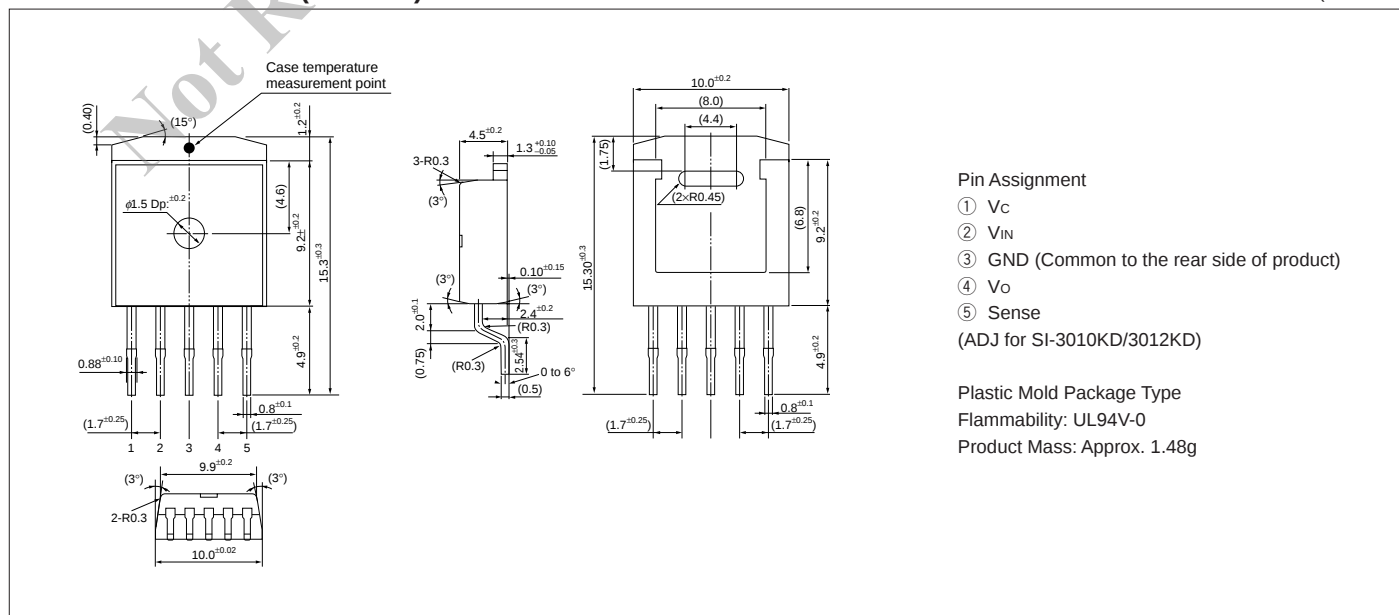
*4: SI-3010KD, SI-3050KD, cannot be used in the following applications because the built-in foldback-type overcurrent protection may cause errors during start-up stage.

(1) Constant current load (2) Positive and negative power supply (3) Series-connected power supply (4) V_O adjustment by raising ground voltage

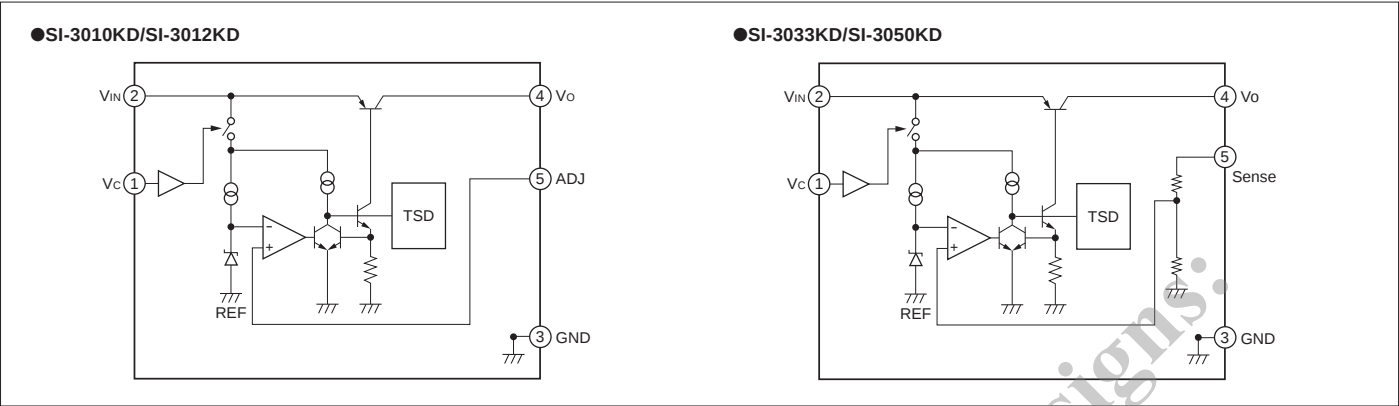
*5: V_{IN} (max) and I_O (max) are restricted by the relation $P_D = (V_{IN} - V_O) \times I_O$. Please calculate these values referring to the Copper laminate area vs. Power dissipation data as shown hereinafter.

■External Dimensions (TO263-5)

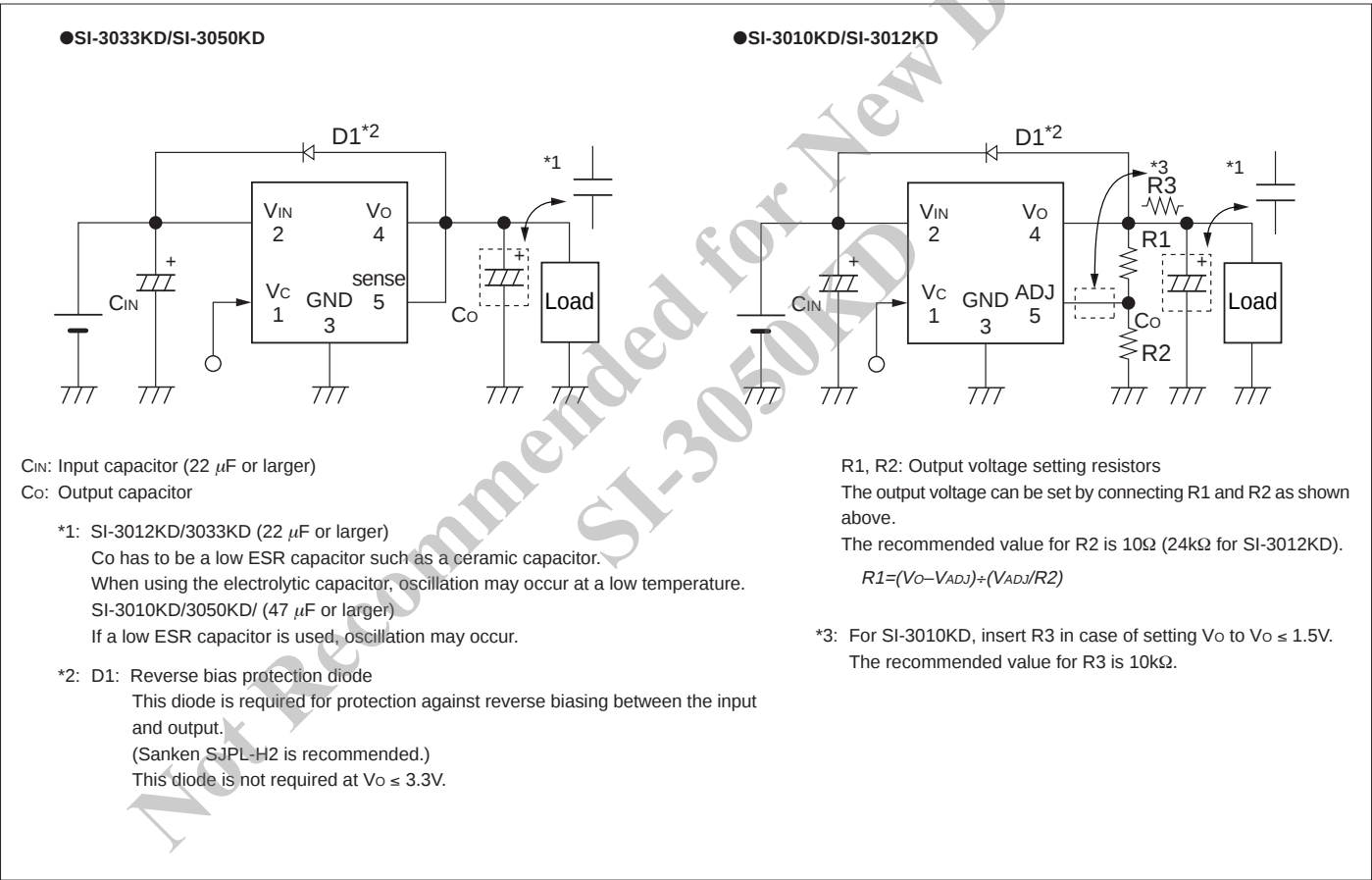
(unit : mm)



Block Diagram



Typical Connection Diagram



Reference Data

