

STK730-080

Specifications

Maximum Ratings at Ta = 25°C (Tc = 25°C unless specified otherwise)

Parameter	Symbol	Condition	Rating	Unit
Operating substrate temperature	Tc max	*1	115	°C
AC input voltage	VAC	*2	280	Vrms
Operating temperature	Topt		-10 to +85	°C
Storage temperature	Tstg		-30 to +115	°C
Maximum output power	Wo max	*2 When V _O = 135 V	210	W
[TR1]				
Drain current	I _D	*3	6	A
Pulse drain current	I _D (puls)	*3	15	A
Drain reverse current	I _{DR}		6	A
Gate-source voltage	V _{GSS}		±30	V
Allowable power dissipation	Pd		100	W
Chip junction temperature	Tj max		150	°C
Thermal resistance	θj-c		1.25	°C/W
[ZD1]				
Allowable power dissipation	P _{ZD1}		500	mW
Chip junction temperature	Tj (ZD1) max		125	°C
Thermal resistance	θj-c (ZD1)		0.2	°C/mW

Note: 1. The recommended substrate temperature is 105°C (maximum).
 2. In the specified test circuit
 3. See the ASO characteristics for these values in overcurrent states.

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Condition	Rating	Unit
Pin 4 input voltage	V4		±8 to ±24	V
Oscillator frequency	f _{osc}		20 to 120	kHz

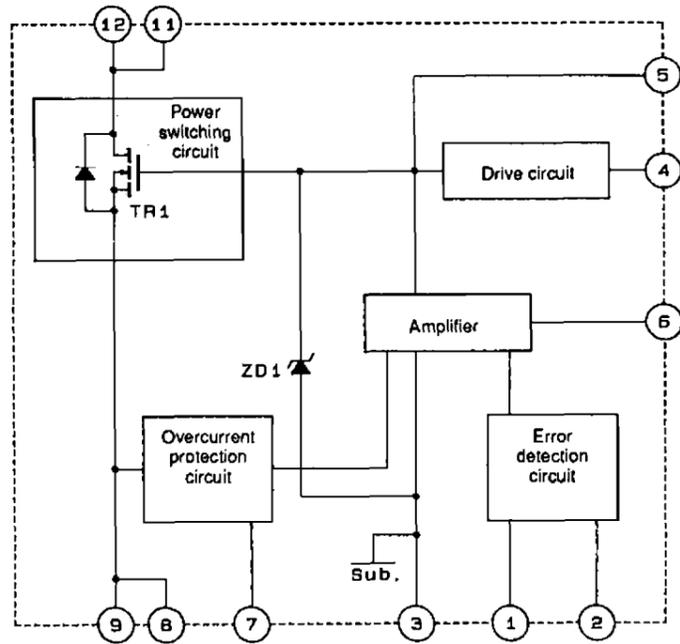
Operating Characteristics at Ta = 25°C (Tc = 25°C unless specified otherwise)

Parameter	Symbol	Condition	Rating			Unit
			min	typ	max	
Output voltage setting		* I _{in} = 8 mA	40.0	40.5	41.0	V
Output voltage temperature coefficient		* Tc = 0 to + 105°C, I _{in} = 8 mA		7		mV/°C
[TR1]						
Drain-source breakdown voltage	V _{(BR) DSS}	I _D = 10 mA, V _{GS} = 0 V	900			V
Gate-source cutoff voltage	V _{GS} (off)	I _D = 1 mA, V _{DS} = 10 V	2.0		3.0	V
On resistance	R _{DS} (on)	I _D = 3 A, V _{GS} = 10 V		2.0	3.0	Ω
Input capacitance	C _{iss}	V _{DS} = 10 V, V _{GS} = 0 V, f = 1 MHz		1200		pF
[ZD1]						
Zener voltage	V _Z	I _Z = 5 mA	23.7		26.3	V

Note: * In the specified test circuit

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Equivalent Circuit Block Diagram

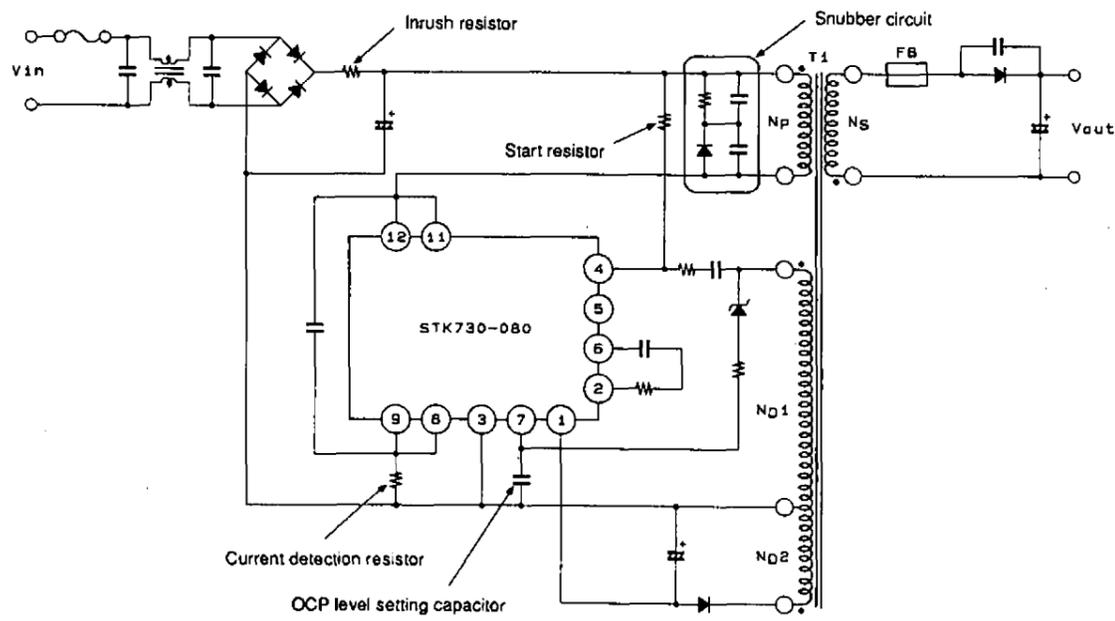


Pin No.	Description
1	Vref (40.5 V typical) input
2	Error detection level
3	Ground
4	Drive voltage input
5	TR1 gate
6	Amplifier circuit control
7	OCF setting level input
8	TR1 source
9	TR1 source
11	TR1 drain
12	TR1 drain

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Note: The back surface of the IC is not an insulator, and may be shorted to pin 3.

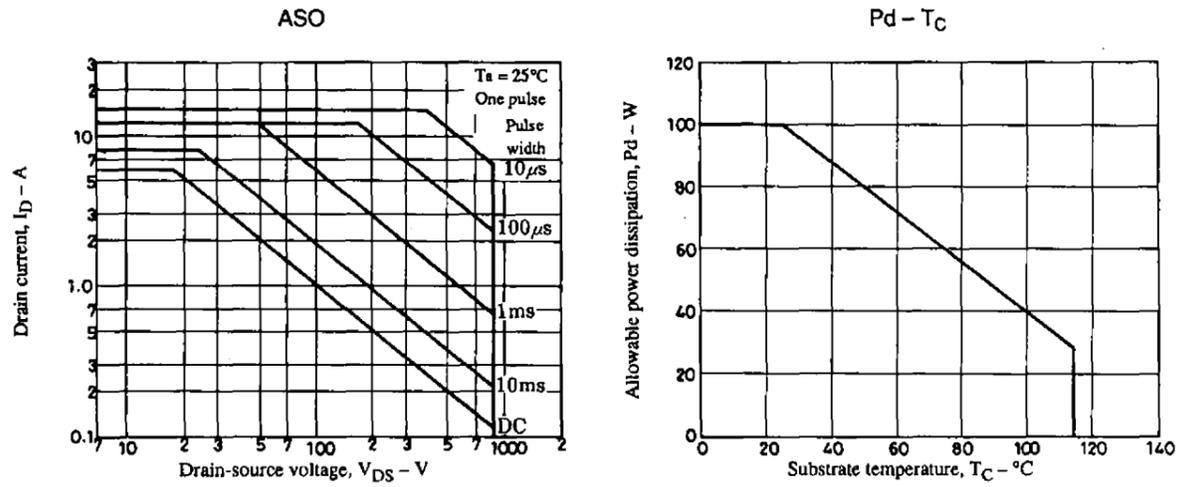
Application Circuit Example



A01043

STK730-080

Characteristics Data



Series Organization

These products are provided as a product series whose members differ mainly in their power capacity. Note that the following table includes products that are under development. Contact your Sanyo sales representative for information on product availability.

Product No.	Maximum Rating				Operating Characteristic			
	V_{DSS}	T_{stg}^*	$T_c \text{ max}$	$T_j \text{ max}$	I_D	AC Input range	$W_o \text{ max}$	$R_{on \text{ typ.}}$
	V	°C	°C	°C	A	V	W	Ω
STK730-010	500	-30 to +115	+115	+150	6.0	85 to 132	110	1.4
STK730-020					8.0		145	0.8
STK730-030					10.0		180	0.7
STK730-040					12.0		210	0.55
STK730-050					15.0		280	0.3
STK730-060	900				3.0	170 to 264	110	5.0
STK730-070					5.0		180	3.0
STK730-080					6.0		210	2.0
STK730-090					8.0		280	1.2

Note: * The recommended substrate temperature is 105°C (maximum).

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