

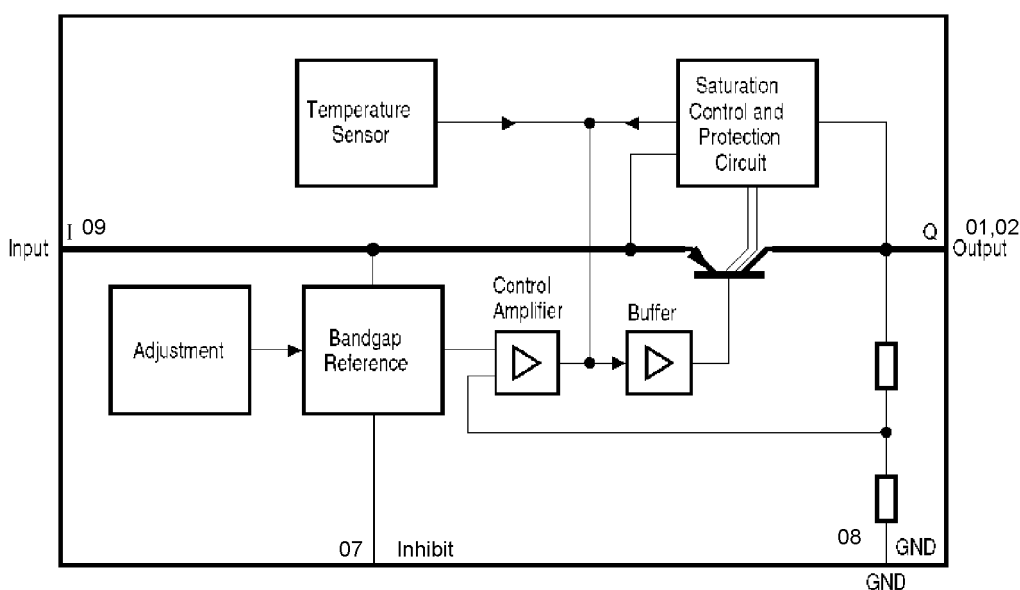
5-V/100mA LOW POWER LOW-DROP FIXED-VOLTAGE REGULATOR WITH LOW CURRENT CONSUMPTION

The IZE4266-2 is a monolithic integrated low power low-drop fixed voltage regulator **5V/100mA** with low current consumption and inhibit input. The IZE4266-2 is specially designed to create power source with 5V output voltage, loads up to 100 mA and drop voltage less than 0.5V. The regulator is designed to supply electronic device in automotive applications and some another applications. The IZE4266-2 is equipped with additional protection against overvoltage of both polarities, load current limitation, short-circuit and overtemperature shutdown of output voltage. The IC is supplied on wafer (unpackaged) form.

Features

- Output voltage tolerance $5\pm 3\%$;
- Low-drop voltage;
- Current capability up to 150 mA;
- Very low current consumption;
- Overheating protection;
- Reverse polarity proof;
- Junction temperature -40 до $+125^{\circ}\text{C}$;
- Suitable for use in automotive electronics;
- Short-circuit proof;
- Inhibit input

Block Diagram



Pad description

Pad number	Symbol	Description
01	Q	Output
02	Q	Output
03	-	Test
04	-	Test
05	-	Test
06	-	Test
07	INH	Inhibit input
08	GND	Ground
09	I	Input

Absolute Maximum Ratings

Parameter, symbol	Unit	Maximum Ratings		Absolute Maximum Ratings	
		Min	Max	Min	Max
Input voltage, U_I	V	6	28	-42	45
Input current (pad 09), I_I	mA	0.1	550	-	-
Ground pin current, I_{GND}	mA	-	4	50	-
Output voltage, U_Q	V	4.9	5.1	-0.3*	32*
Output current (pads 01, 02), I_Q	mA	0.1	500	-	-
Input voltage (pad 07), U_{INH}	V	0.8	3.5	-42*	45*
Junction temperature, T_J	°C	-40*	125	-40*	150
Storage temperature, T_{stg}	°C	-	-	-50	150

* Ambient temperature

Electric parameters

($U_I=13.5\text{ V}$, $U_{INH}=5\text{ V}$ $-40\text{ °C} \leq T_J \leq 125\text{ °C}$, unless specified otherwise)

Parameter, unit of measurement	Symbol	Mode of measurement	Typical value		Note
			Min	Max	
Output voltage, V	U_Q	$9\text{ V} \leq U_I \leq 16\text{ V}$ $5\text{ mA} \leq I_Q \leq 50\text{ mA}$	4.9	5.1	
		$6\text{ V} \leq U_I \leq 21\text{ V}$ $5\text{ mA} \leq I_Q \leq 100\text{ mA}$	4.85	5.15	
Maximum output current, mA	I_{Qmax}	$4.8\text{ V} \leq U_Q \leq 5.2\text{ V}$	150	500	
Consumption current, mA, $I_q = I_I - I_Q$	I_q	$I_Q=0\text{ mA}$, $U_{INH}=0\text{ V}$ ($T_J \leq 100\text{ °C}$)	-	0.001	
		$I_Q=0.1\text{ mA}$, ($T_J \leq 85\text{ °C}$)	-	0.06	
		$I_Q = 0.1\text{ mA}$	-	0.07	
		$I_Q = 50\text{ mA}$	-	4	
Drop-out voltage, V	U_{Dr}	$I_Q = 100\text{ mA}$	-	0.5	1
Load regulation, mV	$\Delta U_{Q(I)}$	$1\text{ mA} \leq I_Q \leq 100\text{ mA}$ $U_I = 16.5\text{ V}$	-	90	
Line regulation, mV	$\Delta U_{Q(U)}$	$6\text{ V} \leq U_I \leq 28\text{ V}$ $I_Q = 1\text{ mA}$	-	30	

Electric parameters

($U_I=13.5\text{ V}$, $U_{INH}=5\text{ V}$ $-40\text{ }^\circ\text{C} \leq T_J \leq 125\text{ }^\circ\text{C}$, unless specified otherwise)

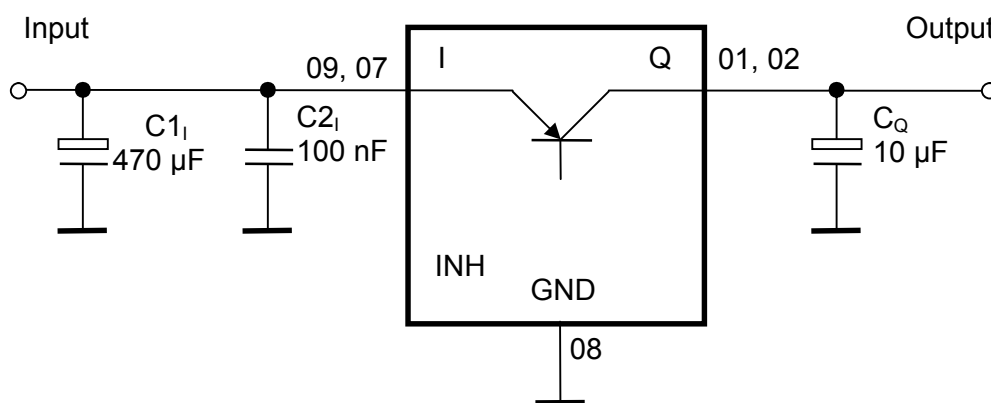
Parameter, unit of measurement	Symbol	Mode of measurement	Typical value	Note
Inhibit input features				
Switch on input voltage, V	$U_{INH,on}$		-	3.5
Switch off input voltage, V	$U_{INH,off}$		0.8	-
Inhibit input current, μA	I_{INH}	$U_{INH} = 5\text{ V}$	-	8
<i>Notes</i> 1 Drop voltage $U_{Dr} = U_I - U_Q$ (measured when the output voltage V_Q has dropped 100 mV from the nominal value obtained at $V_I = 13.5\text{ V}$). 2. Two capacitors 450 μF (electrolytic) and 100nF must be connected to input for measurements				

Typical electric parameters

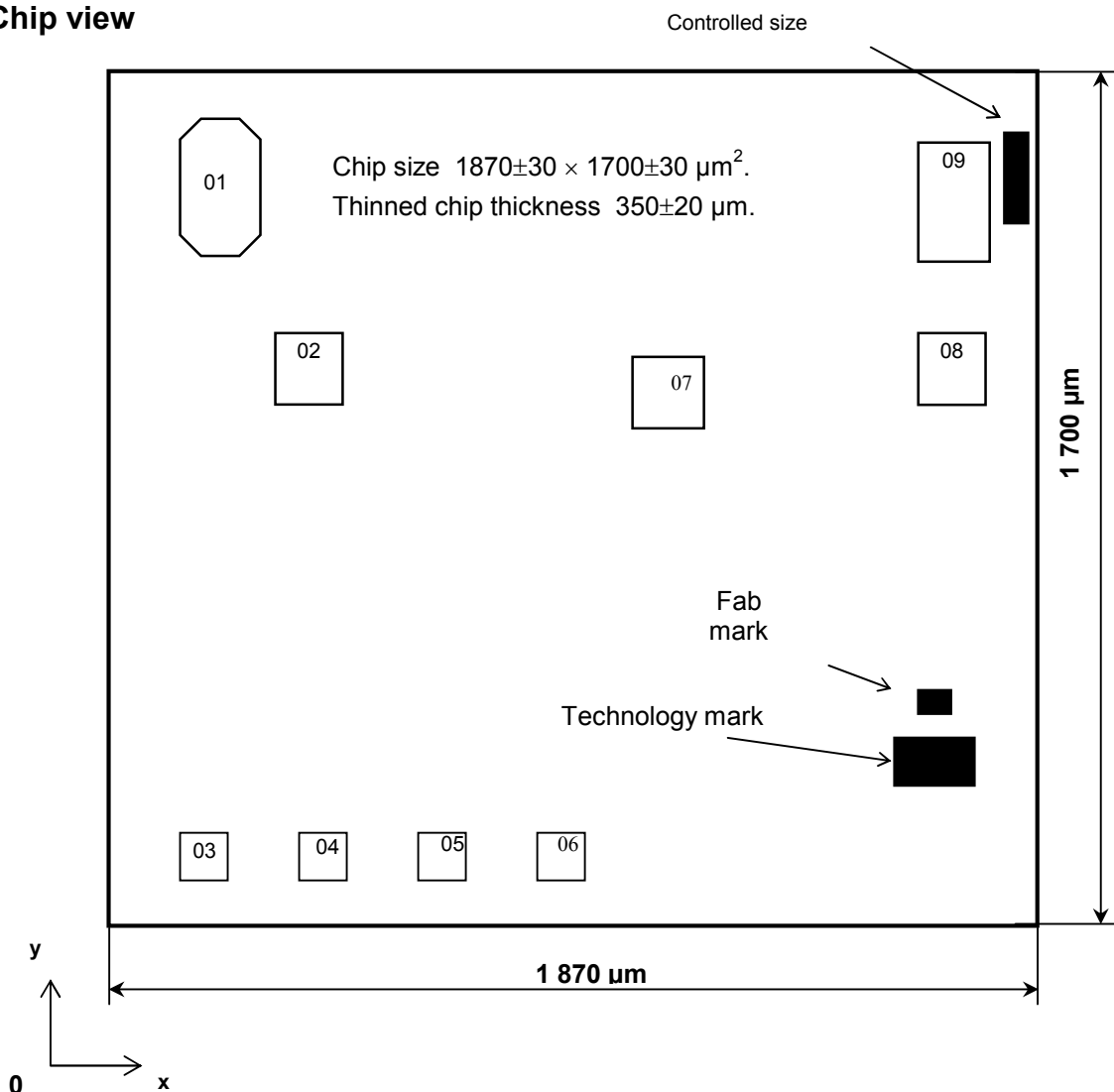
($U_I=13.5\text{ V}$, $-40\text{ }^\circ\text{C} \leq T_J \leq 125\text{ }^\circ\text{C}$, unless specified otherwise)

Parameter, unit of measurement	Symbol	Mode of measurement	Typical value
Power Supply Ripple Rejection, dB	PSRR	$f_r = 100\text{ Hz}$, $U_r = 3\text{ V}$ (peek-to-peek)	68

IZE4266-2 application circuit



Chip view



Pad location

Chip size (X x Y, μm)	Pad number	Pad coordinates				Pad size
		Left bottom corner		Right top corner		
		X, μm	Y, μm	X, μm	Y, μm	
(1870 x 1700)	01	150	1260	260	1440	110x180
	02	243	955	353	1065	110x110
	03	150.5	150.5	230.5	230.5	80x80
	04	345.5	150.5	425.5	230.5	80x80
	05	540.5	150.5	620.5	230.5	80x80
	06	735.5	150.5	815.5	230.5	80x80
	07	955	925	1065	1035	110x110
	08	1610	1068	1720	1178	110x110
	09	1610	1365	1720	1545	110x180

