

## LOW POWER LOW-DROP FIXED-VOLTAGE REGULATOR

The IZE 4264-2 (functional equivalent of TLE4264-2G. Infineon) is a monolithic integrated low power low-drop fixed voltage regulator 5V/100mA with low current consumption. The IZE 4264-2 is specially designed to create power source with 5V output voltage, load current 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 IZE 4264-2 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.

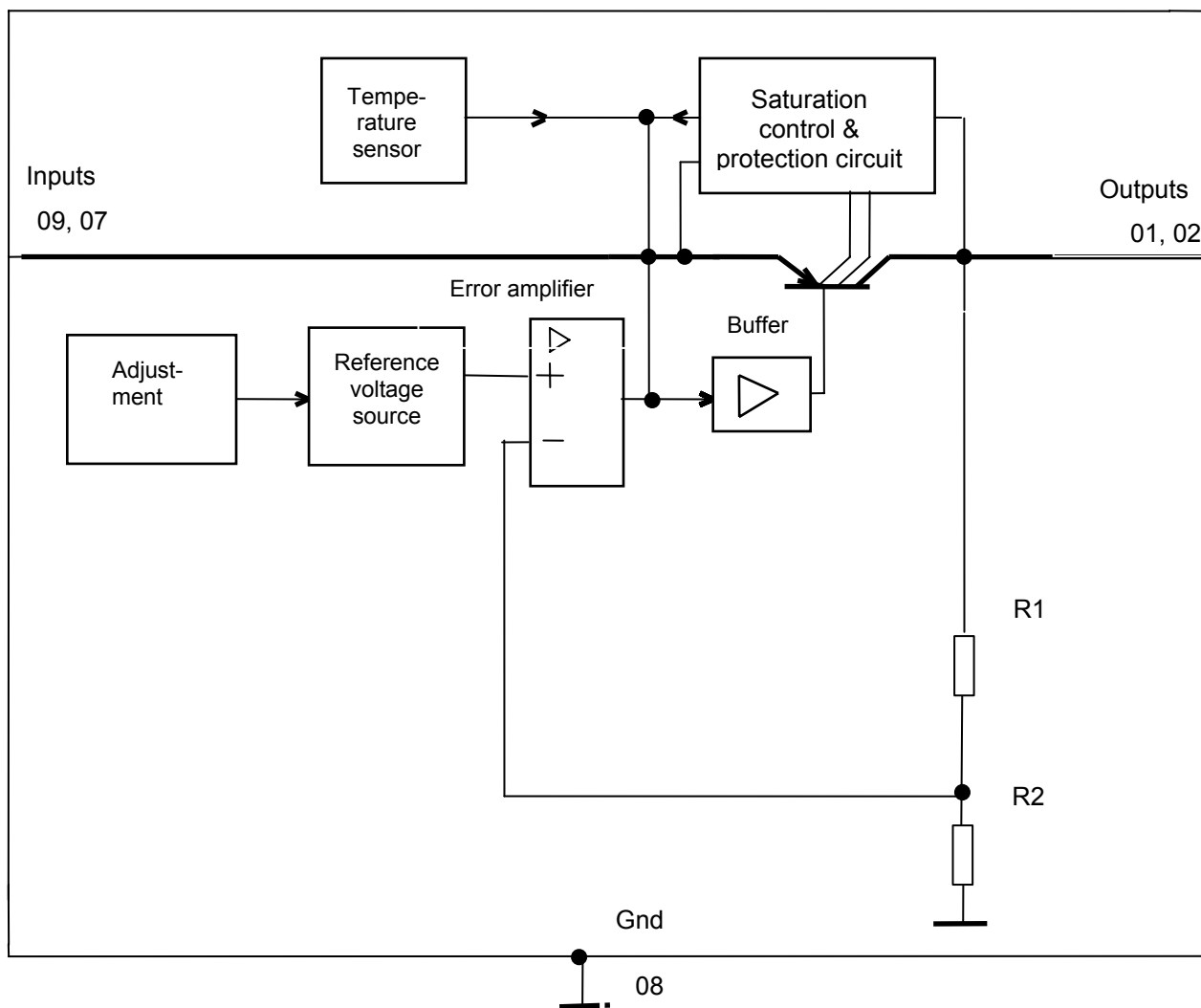
### Features

- 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°C;
- Suitable for use in automotive electronics;

**Table 1 Pad description**

Pad number	Symbol	Description
01	Q	Output
02	Q	Output
03-06	-	Test
07	I	Input
08	GND	Ground
09	I	Input

Block Diagram



R1, R2 – resistors

Fig. 1 – Electric block diagram of IC

Table 2 Absolute maximum ratings and recommended operation mode

Parameter, symbol	Unit	Recommended operation mode		Absolute Maximum Ratings	
		Min	Max	Min	Max
Input voltage, V	$U_I$	6	28	-42	45
Input current (pads 07, 09), mA	$I_I$	0.1	550	-	-
Ground (pad 08) current, mA	$I_{GND}$	-	4	50*	-
Output voltage, V	$U_Q$	4,9	5,1	-0,3*	32*
Output current (pads 01, 02), mA	$I_Q$	0.1	500	-	-
Junction temperature, °C	$T_J$	-40*	125	-40**	150
Storage temperature, °C	$T_{stg}$	-	-	-50	150

\* Ambient temperature is indicated.

\*\* Voltage is not applied to input I

Allowable value of potential of a static electricity 1000 V.

Absolute maximum (limit) value of potential of a static electricity 1500 V

Table 3 Electric parameters

( $U_I=13,5$  V,  $-40$  °C  $\leq T_J \leq 125$  °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, $I_q = I_I - I_Q$	$I_q$	$I_Q=0,1\text{ mA}$ , ( $T_J \leq 85^\circ\text{C}$ )	-	0,07	
		$I_Q = 0,1\text{ mA}$	-	0,08	
		$I_Q = 50\text{ mA}$	-	4	
Drop-out voltage, V	$U_{Dr}$	$I_Q = 100\text{ mA}$	-	0,5	2
Load regulation, mV	$\Delta U_{Q(I)}$	$1\text{ mA} \leq I_Q \leq 100\text{ mA}$ $U_I = 13,5\text{ V}$	-	90	
Line regulation, mV	$\Delta U_{Q(U)}$	$6\text{ V} \leq U_I \leq 28\text{ V}$ $I_Q = 1\text{ mA}$	-	30	
Power Supply Ripple Rejection, dB	PSRR	$f_r = 100\text{ Hz}$ , $U_r = 3\text{ V}$ (peek-to-peek)	65	-	

#### Notes

- Measurement of electric parameters is processed with connected to input electrolytic capacitor  $C_{1I} = 470\text{ }\mu\text{F}$ , and capacitor  $C_{2I} = 100\text{ nF}$  and output capacitor  $C_Q = 10\text{ }\mu\text{F}$ .
- Drop voltage  $U_{dr} = U_I - U_Q$  is measured, when the output voltage  $U_Q$  has dropped 100mV from the nominal value obtained at  $U_I = 13.5\text{ V}$ .

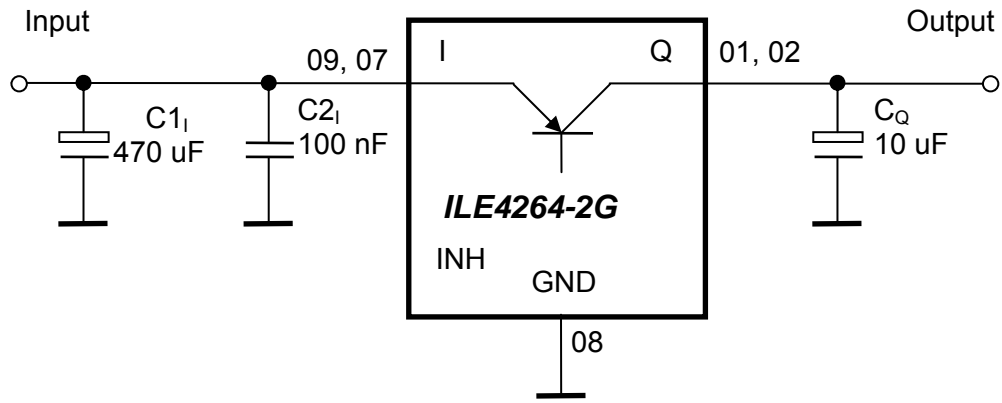
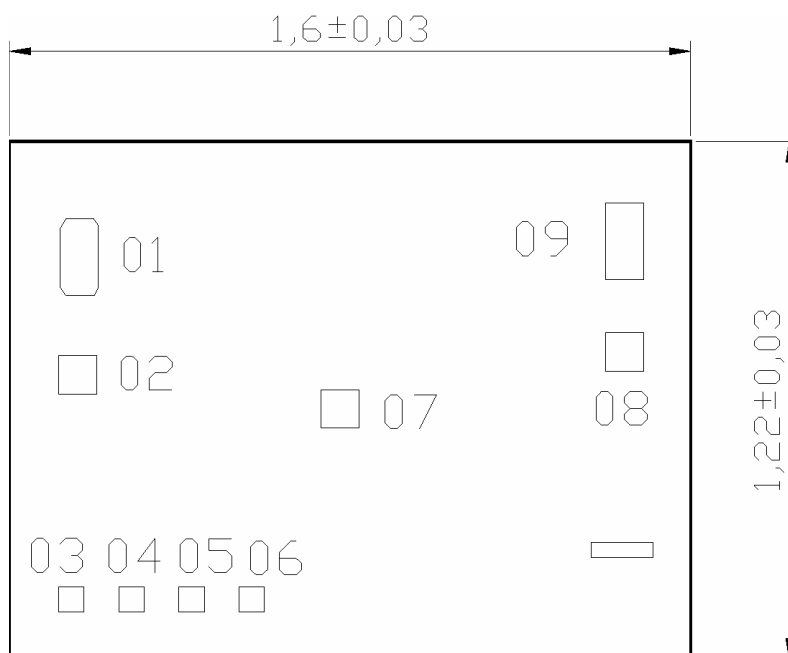


Fig.2 Recommended application circuit



Contact pad coordinates are indicated in the table .

Technological mark on chip «4264-2.» has coordinates, mm: left bottom corner  
 $X = 1,500$  ,  $Y = 0,258$ .

Chip thickness is  $0,35 \pm 0,02$ .

**Pad location table**

Contact pad number	Coordinates (Left bottom corner), mm	
	X	Y
01	0,120	0,857
02	0,116	0,625
03	0,116	0,112
04	0,257	0,112
05	0,398	0,112
06	0,539	0,112
07	0,7315	0,5455
08	1,400	0,679
09	1,400	0,894

Notes

- Coordinates and size of the contact pads are given by the layer «Passivation»
- Sizes of contact pads are:
  - pads 03-06 -  $0,060 \times 0,060$  mm,
  - pads 02, 07, 08 -  $0,090 \times 0,090$  mm,
  - pads 01, 09 -  $0,090 \times 0,180$  mm.
- Bevel of two corners of the first contact pad ( $24 \pm 2$ )  $\mu\text{m}$

**Fig. 3– Chip outline drawing**