

# DATA SHEET

## **TDA8359J**

Full bridge vertical deflection output  
circuit in LVDMOS

Product specification  
Supersedes data of 13 March 2000  
Filed under Integrated Circuits, IC02

2002 Jan 21

## Full bridge vertical deflection output circuit in LVDMOS

## TDA8359J

### FEATURES

- Few external components required
- High efficiency fully DC-coupled vertical bridge output circuit
- Vertical flyback switch with short rise and fall times
- Built-in guard circuit
- Thermal protection circuit
- Improved EMC performance due to differential inputs.

### GENERAL DESCRIPTION

The TDA8359J is a power circuit for use in 90° and 110° colour deflection systems for 25 to 200 Hz field frequencies, and for 4 : 3 and 16 : 9 picture tubes. The IC contains a vertical deflection output circuit, operating as a high efficiency class G system. The full bridge output circuit allows DC coupling of the deflection coil in combination with single positive supply voltages.

The IC is constructed in a Low Voltage DMOS (LVDMOS) process that combines bipolar, CMOS and DMOS devices. DMOS transistors are used in the output stage because of absence of second breakdown.

### QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
<b>Supplies</b>						
$V_P$	supply voltage		7.5	12	18	V
$V_{FB}$	flyback supply voltage		$2 \times V_P$	45	66	V
$I_{q(P)(av)}$	average quiescent supply current	during scan	–	10	15	mA
$I_{q(FB)(av)}$	average quiescent flyback supply current	during scan	–	–	10	mA
$P_{tot}$	total power dissipation		–	–	10	W
<b>Inputs and outputs</b>						
$V_{i(p-p)}$	input voltage (peak-to-peak value)		–	1000	1500	mV
$I_{o(p-p)}$	output current (peak-to-peak value)		–	–	3.2	A
<b>Flyback switch</b>						
$I_{o(peak)}$	maximum (peak) output current	$t \leq 1.5$ ms	–	–	$\pm 1.8$	A
<b>Thermal data; in accordance with IEC 60747-1</b>						
$T_{stg}$	storage temperature		–55	–	+150	°C
$T_{amb}$	ambient temperature		–25	–	+85	°C
$T_j$	junction temperature		–	–	150	°C

### ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
TDA8359J	DBS9P	plastic DIL-bent-SIL power package; 9 leads (lead length 12/11 mm); exposed die pad	SOT523-1

Full bridge vertical deflection output circuit  
in LVDMOS

TDA8359J

BLOCK DIAGRAM

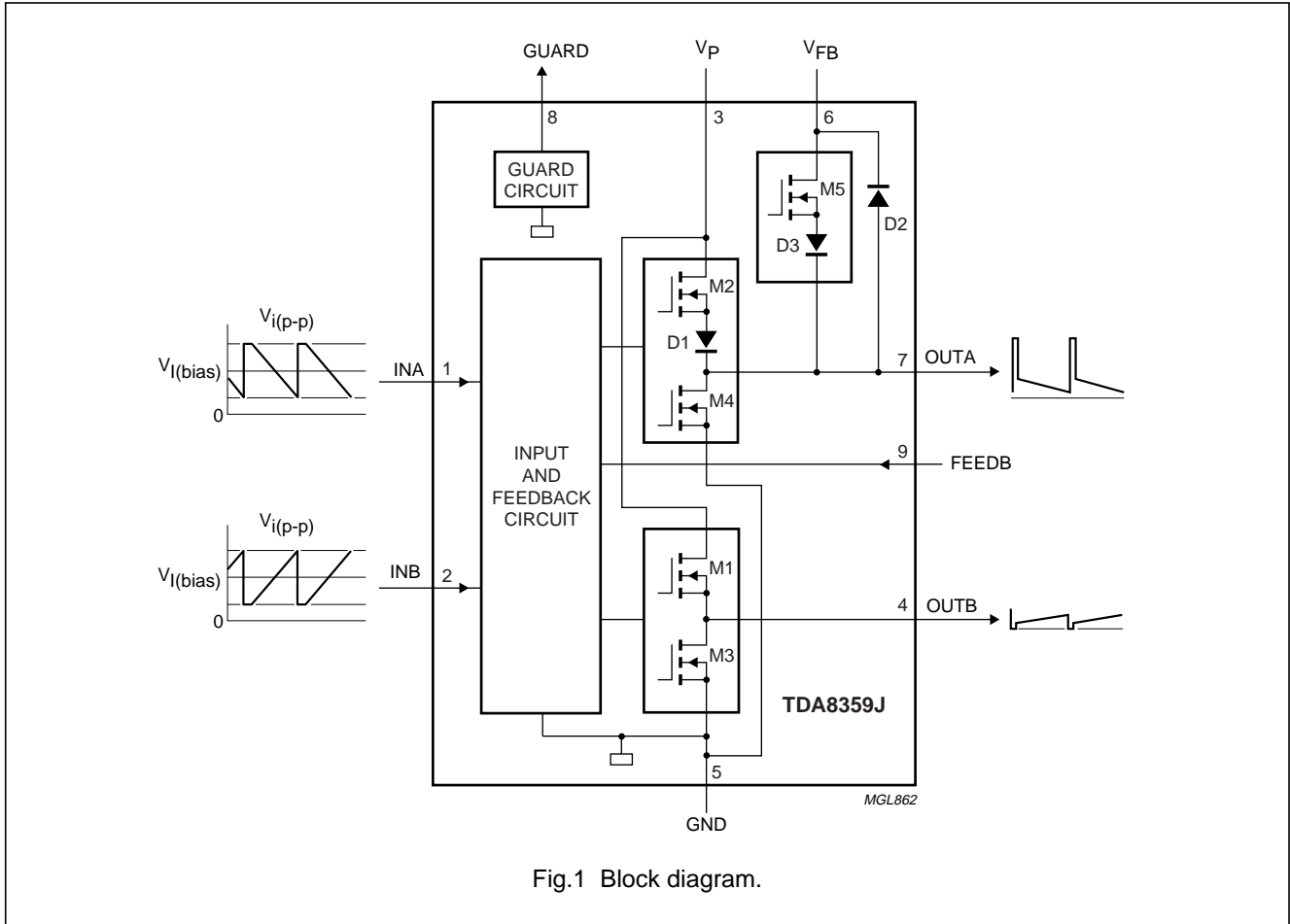


Fig.1 Block diagram.

PINNING

SYMBOL	PIN	DESCRIPTION
INA	1	input A
INB	2	input B
VP	3	supply voltage
OUTB	4	output B
GND	5	ground
VFB	6	flyback supply voltage
OUTA	7	output A
GUARD	8	guard output
FEEDB	9	feedback input

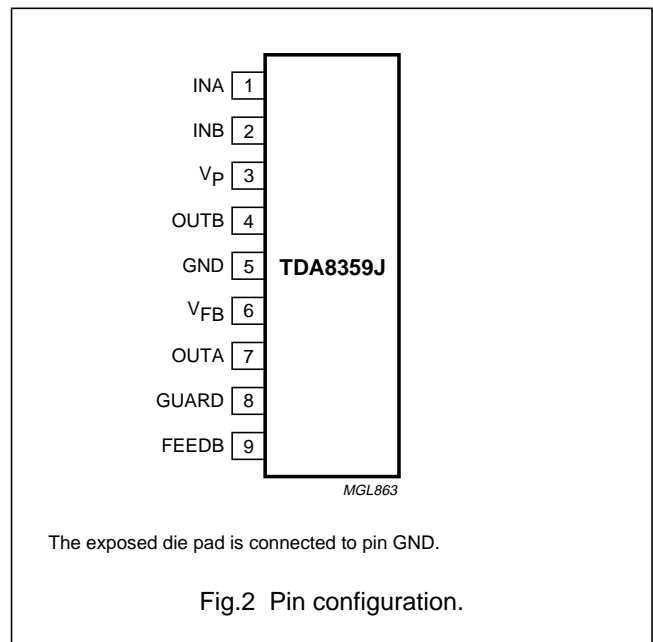


Fig.2 Pin configuration.