

**EAST/WEST CORRECTION
 FOR RECTANGULAR TV-TUBES**
ADVANCE DATA

- LOW POWER DISSIPATION
- PULSE WIDTH MODULATOR FOR SWITCH MODE OPERATION
- OUTPUT SINK CURRENT UP TO 800mA
- OUTPUT SOURCE CURRENT UP TO 100mA
- PARASITIC PARABOLA SUPPRESSION DURING VERTICAL FLYBACK
- VERTICAL CURRENT SENSE INPUTS GROUND COMPATIBLE
- PROGRAMMABLE PARABOLA CURRENT GENERATOR FOR DIFFERENT TV-TUBES
- EXTERNAL KEYSTONE ADJUSTMENT

DESCRIPTION

The TDA8146 is a monolithic integrated circuit in a 14 pin dual-in-line plastic package.

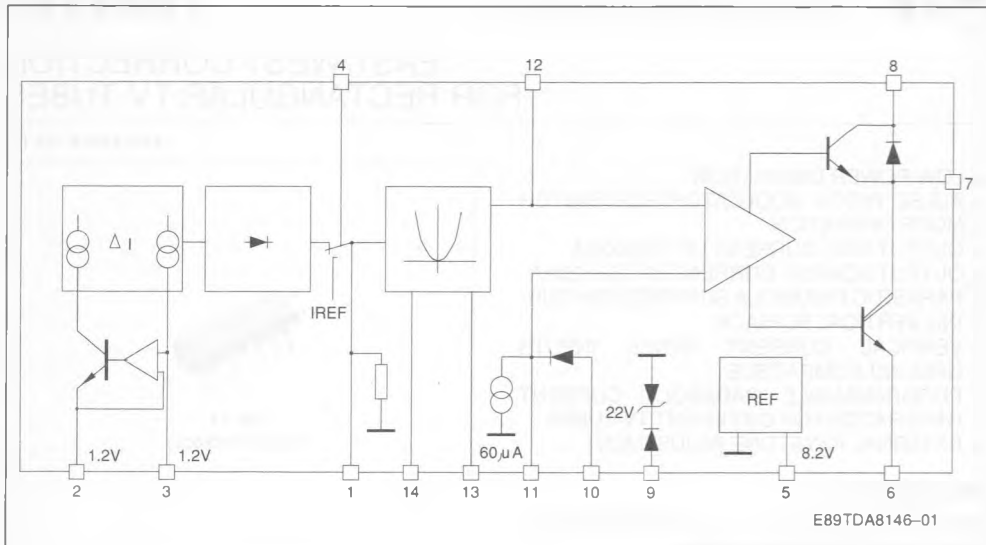
The TDA8146 is designed for use in the east-west pin-cushion correction by driving a diode modulator in TV and monitor applications.

Since the parabola current generator is programmable the device can operate with different CRTs.


PIN CONNECTIONS


E89TDA8146-02

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
I_7	Output Sink Current	800	mA
I_7	Output Source Current	100	mA
V_S	Supply Voltage	28	V
V_4	Vertical Flyback Input Voltage	- 0.3 to 60	V
V_{10}	Input Voltage at Pin 10	- 10 to V_S	V
V_9	Input Voltage at Pin 9	- 10 to 20	V
V_{in}	Input Voltage at all other Pins	- 0.3 to V_S	V
T_{stg}	Storage Temperature	- 40 to 150	°C
T_j	Junction Temperature	0 to 150	°C

THERMAL DATA

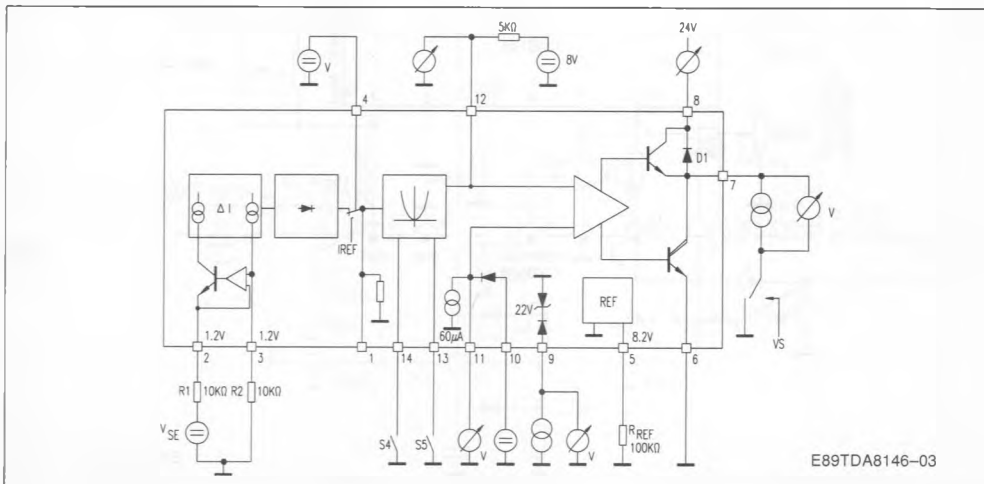
$R_{thJ-amb}$	Junction-ambient Thermal Resistance	Max	80	°C/W
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ELECTRICAL CHARACTERISTICS

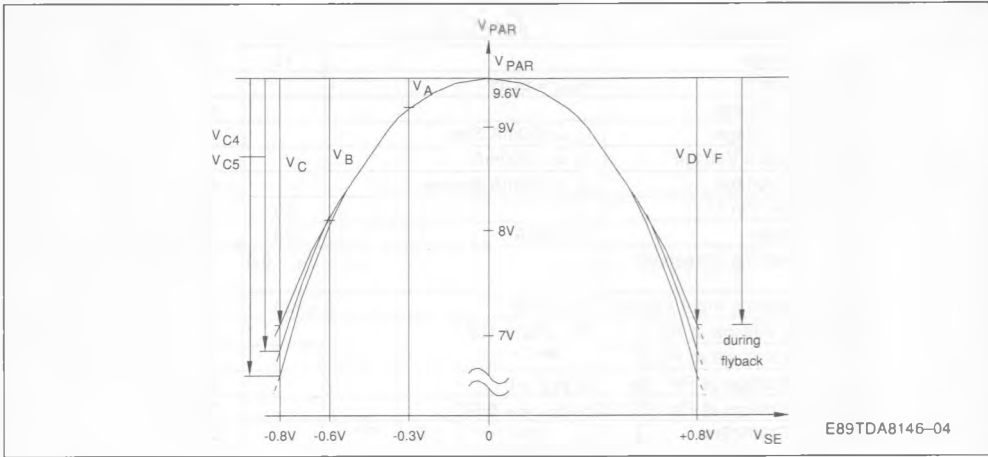
(refer to test circuit $V_S = 24V$, $T_J = 25^\circ C$; unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_S	Supply Voltage		15	24	26	V
I_S	Supply Current	$V_{OUT} = LOW$		4	7	mA
V_5	Reference Voltage			8.2		V
V_{7L}	Saturation Voltage	$I_O = 800mA$ Sink		1.2	2	V
V_{SAT}	Diode Forward Voltage	$I_O = -800mA$		1.1	1.7	V
V_{7H}	Saturation Voltage	$I_O = 100mA$ Source		0.8	1.25	V
I_{11}	Current Sink Pin 11		40	60	80	μA
V_9	Zener Voltage	$I_9 = 5mA$	20	22	24	V
V_{4T}	Vertical Blanking Threshold Voltage		$V_S - 0.5$	V_S	$V_S + 0.5$	V
I_4	Vertical Blanking Input Current	$V_4 = 50V$	25	50	100	μA
V_2	Reference Voltage at Pin 2	$R1 = R2 = 10K$		1.3		V
V_3	Reference Voltage at Pin 3			1.3		V
V_{PARO}	Parabola Voltage at Pin 12	$\Delta V_{SE} = 0$		9.7		V
V_C	Parabola Voltage at Pin 12	$\Delta V_{SE} = +0.8V$		7.05		V
K_A	Parabola Coefficient	$K_A = \frac{VA}{VB}$		0.25		
K_C	Parabola Coefficient	$K_C = \frac{VC}{VB}$		1.75		
K_5	Parabola Coefficient	$K_5 = \frac{VC5}{VC}$; S4 or S5 Closed		1.07		
K_4	Parabola Coefficient	$K_4 = \frac{VC4}{VC}$; S4 + S5 Closed		1.17		
K_S	Parabola Symmetry	$K_S = \frac{VC}{VD}$	0.94	1.0	1.06	
K_F	Flyback Coefficient	$K_F = \frac{VC}{VF}$; $V_4 = 15V$		1.0		

TEST CIRCUIT



PARABOLA CHARACTERISTICS



APPLICATION DIAGRAM

