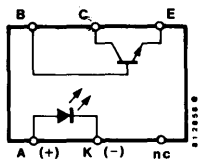
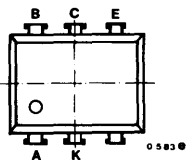
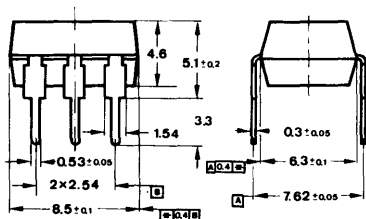




Applications: Galvanically separated circuits, non-interacting switches

- Isolation voltage
 - 4 N 25 – $V_{is} = 2.5 \text{ kV}$
 - 4 N 26 – $V_{is} = 1.5 \text{ kV}$
 - 4 N 27 – $V_{is} = 1.5 \text{ kV}$
- Low coupling capacity typ. 1 pF
- Current transfer ratio typ. 0.3/0.5
- Low temperature coefficient of the CTR

Dimensions in mm



Plastic case
Weight ca. 0.7 g

4 N 25 · 4 N 26 · 4 N 27

Absolute maximum ratings

Emitter

Reverse voltage	V_R	5	V
Forward current	I_F	60	mA
Forward surge current $t_p \leq 10 \mu s$	I_{FSM}	3	A
Power dissipation $T_{amb} \leq 25^\circ C$	P_V	100	mW
Junction temperature	T_j	100	$^\circ C$

Detector

Collector-base voltage	V_{CBO}	70	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-collector voltage	V_{ECO}	7	V
Collector current	I_C	50	mA
Peak collector current $\frac{t_p}{T} = 0.5, t_p \leq 10 ms$	I_{CM}	100	mA
Power dissipation $T_{amb} \leq 25^\circ C$	P_V	150	mW
Junction temperature	T_j	100	$^\circ C$

Coupled device

DC isolation voltage	4 N 25	$V_{is}^{1)}$	2.5	kV
	4 N 26, 4 N 27	$V_{is}^{1)}$	1.5	kV
Total power dissipation $T_{amb} \leq 25^\circ C$		P_{tot}	250	mW
Storage temperature range		T_{stg}	-55 ... +100	$^\circ C$
Soldering temperature, maximal $t \leq 10 s$		$T_{sd}^{2)}$	260	$^\circ C$

¹⁾ related to standard climate 23/50 DIN 50 014

²⁾ Distance from the touching border $\geq 2 mm$

Electrical characteristics

Min. Typ. Max.

Emitter

Forward voltage

$I_F = 50 \text{ mA}$

$V_F^{*)}$

1.25

1.5

V

Breakdown voltage

$I_R = 100 \mu\text{A}$

$V_{(BR)}^{*)}$

5

V

Junction capacitance

$V_R = 0, f = 1 \text{ MHz}$

C_j

50

pF

Detector

Collector-base breakdown voltage

$I_C = 100 \mu\text{A}$

$V_{(BR)CBO}^{*)}$

70

V

Collector-emitter breakdown voltage

$I_C = 1 \text{ mA}$

$V_{(BR)CEO}^{*)}$

30

V

Emitter-collector breakdown voltage

$I_E = 100 \mu\text{A}$

$V_{(BR)ECO}^{*)}$

7

V

Collector cut-off current

$V_{CB} = 10 \text{ V}, I_F = 0, E = 0$

$I_{CBO}^{*)}$

0.1

20

nA

$V_{CE} = 10 \text{ V}, I_E = 0, E = 0$

$I_{CEO}^{*)}$

3.5

50

nA

Coupled device

Isolation voltage

$t = 1 \text{ min}$

4 N 25

$V_{is}^{1)}$

2.5

kV

4 N 26, 4 N 27

$V_{is}^{1)}$

1.5

kV

Isolation resistance

$V_{is} = 1 \text{ kV}, 40 \% \text{ relative humidity}$

$R_{is}^{1)}$

10^{12}

Ω

Collector current

$I_F = 10 \text{ mA}, V_{CE} = 10 \text{ V},$

4 N 25, 4 N 26

$I_C^{*)}$

2

5

mA

4 N 27

$I_C^{*)}$

1

3

mA

Current transfer ratio

$I_F = 10 \text{ mA}, V_{CE} = 10 \text{ V}$

4 N 25, 4 N 26

CTR

0.2

0.5

4 N 27

CTR

0.1

0.3

Collector-emitter saturation voltage

$I_F = 50 \text{ mA}, I_C = 2 \text{ mA}$

$V_{CEsat}^{*)}$

0.5

V

Cut-off frequency

$I_F = 10 \text{ mA}, V_{CE} = 5 \text{ V}, R_L = 100 \Omega$

f_c

110

kHz

Coupling capacitance

$f = 1 \text{ MHz}$

C_k

1

pF

^{*}) AQL = 0.65 %

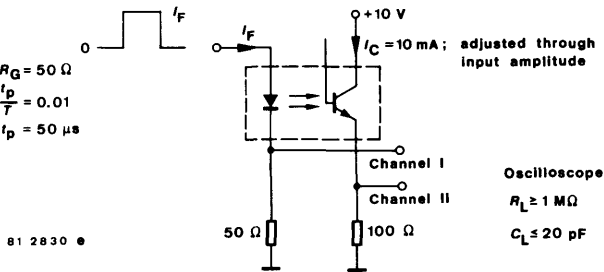
¹⁾) related to standard climate 23/50 DIN 50 014

4 N 25 · 4 N 26 · 4 N 27

Switching characteristics

$V_S = 10\text{ V}$, $I_C = 10\text{ mA}$, $R_L = 100\ \Omega$, see test circuit

	Min.	Typ.	Max.
Turn-on time		6	μs
Turn-off time		4	μs



Test circuit