

FEATURES

- UP TO 18 BIDIRECTIONAL TRANSIL FUNCTIONS
- MINIMUM BREAKDOWN VOLTAGE BETWEEN TWO INPUT PINS : 25 V
- VERY LOW CAPACITANCE : C = 30pF @ V_{RM}

DESCRIPTION

Dedicated to "ESD" PROTECTION, this TRANSIL array protects against surges of up to 25 kV.

It is particularly recommended for RS232 I/O port protection where the line interface usually only withstand 2 kV ESD surges.

It clamps the voltage just above the 24 V level supply for both positive and negative transients.

COMPLIES WITH THE FOLLOWING STANDARDS :

- ESD standard :
 - . IEC 801-2 15kV (air discharge)
 - 8kV (contact discharge)
 - . IEC 801-4 40A (repetitive 2.5 kHz)

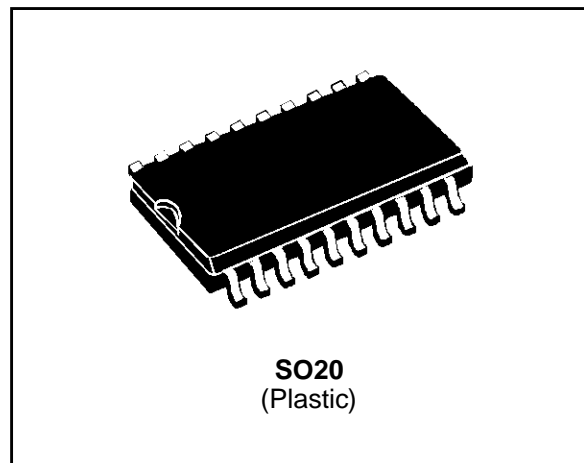
- VDE 0875 4kV 5 / 30ns (repetitive 10Hz)

- MIL STD 883C - Method 3015-6

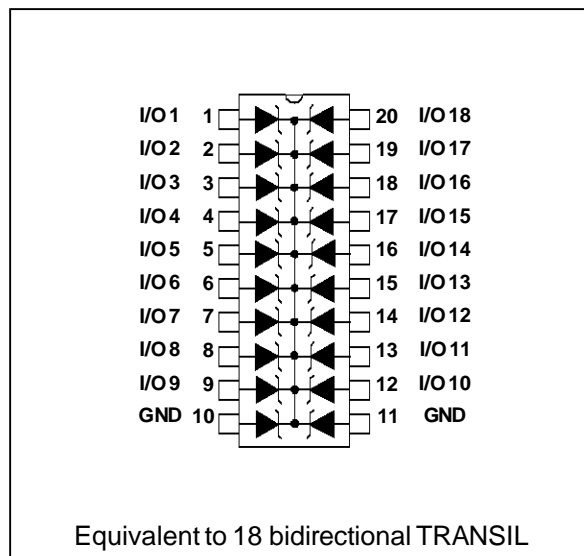
V_P = 25kV C = 100pF R = 1500Ω
3 positive strikes and 3 negative strikes (F = 1 Hz)

- Human body test :

V_P = 4kV C = 150pF R = 150Ω



FUNCTIONAL DIAGRAM



ABSOLUTE MAXIMUM RATINGS (0°C ≤ T_{amb} ≤ 70°C)

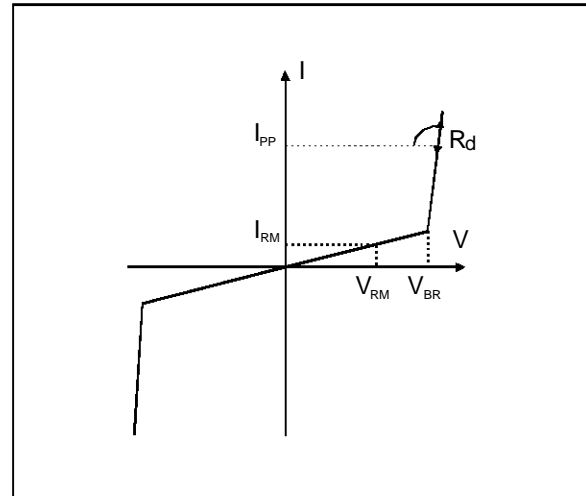
Symbol	Parameter	Value	Unit
V _{PP}	Maximum electrostatic discharge MIL STD 883C - METHOD 3015-6	25	kV
T _{stg} T _j	Storage temperature range Maximum junction temperature	- 55 to + 150 125	°C °C

ESDA25DB3

ELECTRICAL CHARACTERISTICS

($T_{amb} = 25^{\circ}\text{C}$)

Symbol	Parameter
V_{RM}	Stand-off voltage
V_{BR}	Breakdown voltage
R_d	Dynamic impedance
I_{RM}	Leakage current
I_{PP}	Peak pulse current
αT	Temperature coefficient



Type	$I_{RM} @ V_{RM}$		$V_{BR} @ I_R$			R_d	C_1	C_2	αT
	max.		note 1			typ.	typ.	typ.	max.
	μA	V	V	V	mA	note 2	note 3	note 4	note 5
	μA	V	V	V	mA	Ω	pF	pF	$10^{-4}/^{\circ}\text{C}$
ESDA25DB3	2	24	25	30	1	0.5	50	30	9.7

Note 1 : Between any I/O pin and Ground

Note 2 : $I_{PP} = 25 \text{ A}$, $t_p = 2.5 \mu\text{s}$

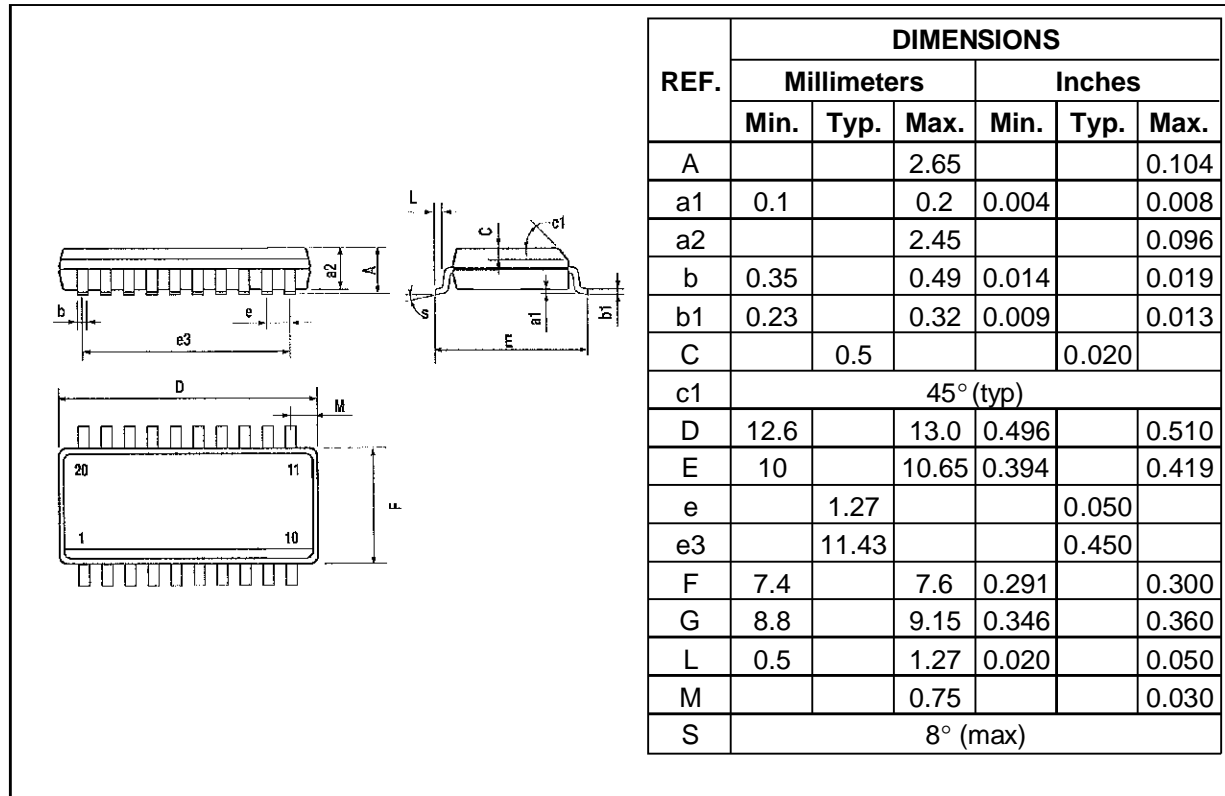
Note 3 : Capacitance value between two input pins at 0V bias

Note 4 : Capacitance value between two input pins at V_{RM}

Note 5 : $\Delta V_{BR} = \alpha T * [T_{amb} - 25] * V_{BR}(25^{\circ}\text{C})$

ESDA25DB3

PACKAGE MECHANICAL DATA SO20 (Plastic)



Packaging : Products are supplied in antistatic tubes.

MARKING : Logo, Date Code, E25DB3

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