DESCRIPTION

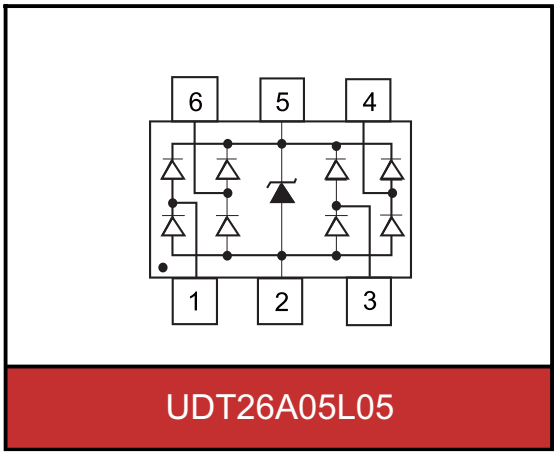
UDT26A05L05 are surge rated diode arrays designed to protect high speed data interfaces.This series has been specifically designed to protect sensitive components which are connected to data and transmission lines from over-voltage caused by electrostatic discharge(ESD),electrical fast transients (EFT), and lightning.

The unique design of the UDT26A05L05 devices incorporates one surge rated, and four data lines.Low capacitance steering diodes and a TVS diode in a single package.The low capacitance array configuration allows the user to protect four high-speed data or transmission lines.

HBM : ±8kV
Air Mode : ±15kV

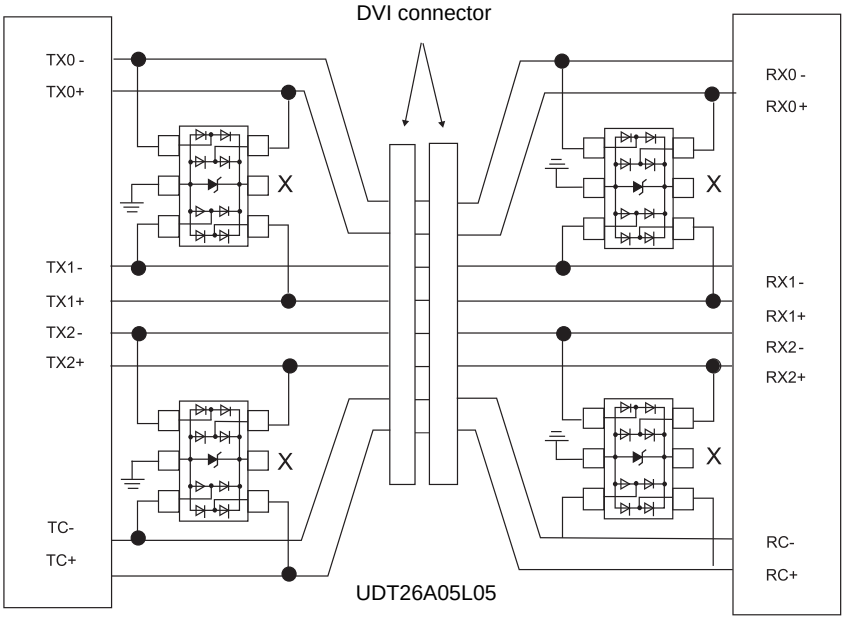
SPECIFICATION FEATURES

- IEC61000-4-2 ESD 15KV Air,8KV contact compliance
- Small SOT23-6L surface mount package
- Protects four high-speed data lines and one power line
- Array of surge rated,low capacitance diodes
- Low clamping voltage
- Low leakage current
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Marking: B 05B or 054



APPLICATIONS

- USB power and data line protection
- 10/100/1000 Ethernet
- Video line protection
- I^2C bus protection
- WAN/LAN equipment
- ISDN S/T interface
- Microcontroller input protection
- Portable electronics



DVI Data Line Protection

ELECTRICAL CHARACTERISTICS (T_J=25℃)

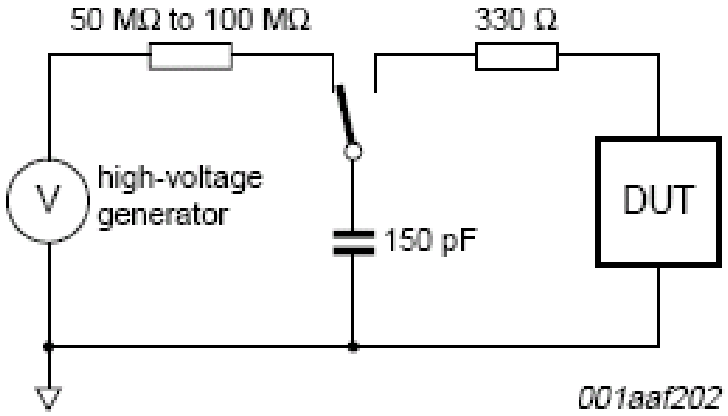
Rating	Symbol	Value	Unit
ESD voltage (HBM contact)	V_{ESD}	±8	KV
ESD voltage (AIR contact)		±15	
Storage & operating temperature range	T_{STG} ,T_J	-55~+150	℃

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				5	V
Reverse breakdown voltage	V_{BR}	I_{BR}=1mA	6			V
Reverse leakage current	I_R	V_R=5V			5	μA
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=1A			9.8	V
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=2A			11	V
Off state junction capacitance	C_J	0Vdc,f=1MHZ between I/O pins and GND		2.5		pF

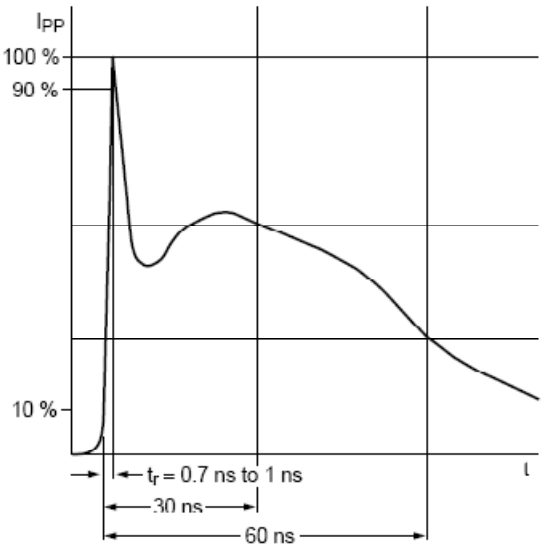
ESD PROTECTION STANDARDS

IEC 61000-4-2

Interfaces of consumer electronic equipment are widely specified according to the International Electrotechnical Commission standard IEC 61000-4-2. This standard is not targeted towards particular devices but towards general equipment, systems and subsystems that may be involved in electrostatic discharge. consists of a 150 pF capacitor and a 330 Ω series resistor representing the counterpart to the Device Under Test (DUT).



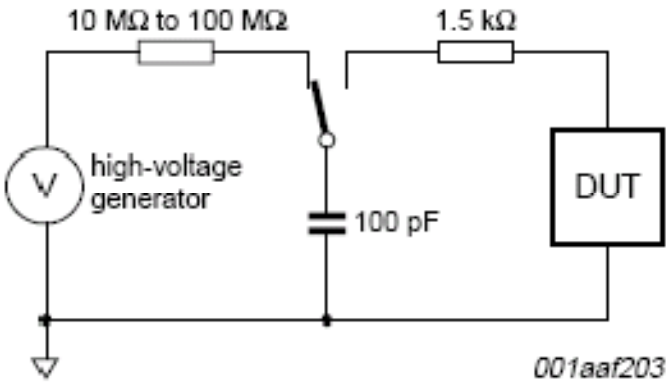
Test circuit according IEC 61000-4-2



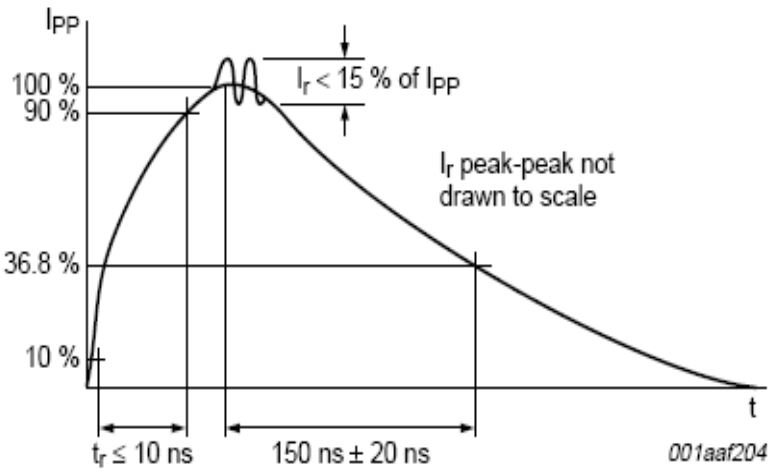
ESD surge according IEC 61000-4-2

Human Body Model (HBM,MIL-883E method 3015.7)

The HBM standard simulates an ESD surge generated by human contact to electronic components.



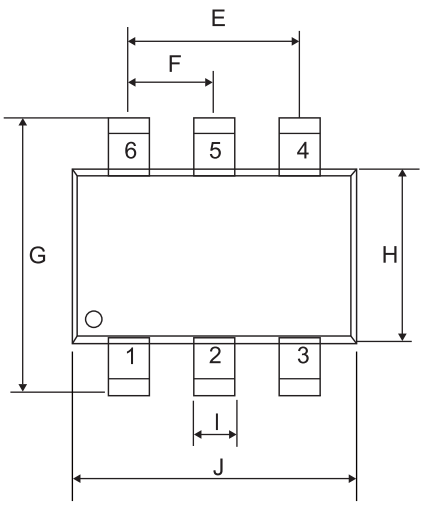
Test circuit according to MIL-883E method 3015.7

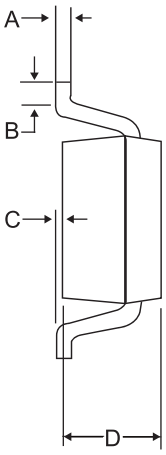


ESD surge according to MIL-883E method 3015.7

PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

SOT23-6L(unit:mm)





DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.11	0.19
B	0.016	-	0.40	-
C	-	0.004	-	0.10
D	0.039	0.047	1.00	1.20
E	0.074	0.075	1.88	1.92
F	0.037	0.038	0.93	0.97
G	0.102	0.118	2.60	3.00
H	0.059	0.067	1.50	1.70
I	0.016		0.41	
J	0.110	0.118	2.80	3.00