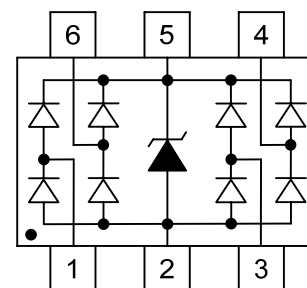


Description

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

The unique design of the device 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.



Features

- IEC61000-4-2 ESD 15KV Air, 8KV contact compliance
- SOT23-6L surface mount package
- Protects four high-speed data lines and one power line
- Array of surge rated, low capacitance diodes
- Working voltage: 5V
- Low leakage current
- Low clamping voltage
- Solder reflow temperature: Pure Tin-Sn, 260~270°C

Applications

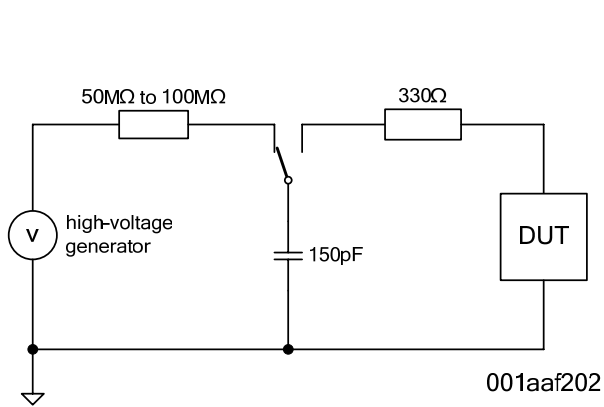
- USB power and data line protection
- 10/100/1000 Ethernet
- Video line protection
- I²C bus protection
- WAN/LAN equipment
- ISDN S/T interface
- Microcontroller input protection
- Portable electronics

Maximum Ratings

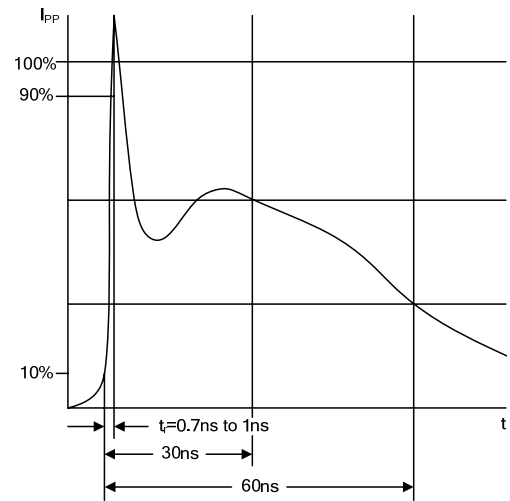
Rating	Symbol	Value	Unit
ESD voltage (Contact discharge)	V _{ESD}	±8	kV
ESD voltage (Air discharge)		±15	
Storage & operating temperature range	T _{STG} , T _J	-55~+150	°C

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 ($t_p=8/20\mu s$)	V_C	$I_{PP}=1A$			9.8	V
Clamping voltage ($t_p=8/20\mu s$)	V_C	$I_{PP}=2A$			16	V
Off state junction capacitance	C_J	0Vdc, f=1MHz Between I/O pins and GND		2.5		pF

IEC61000-4-2



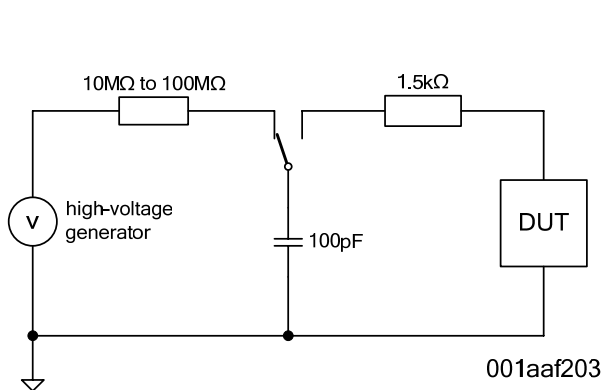
Test circuit according IEC61000-4-2



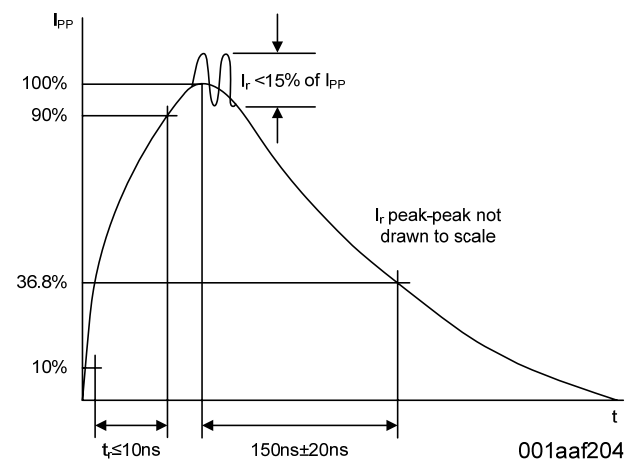
ESD surge according IEC61000- -

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

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

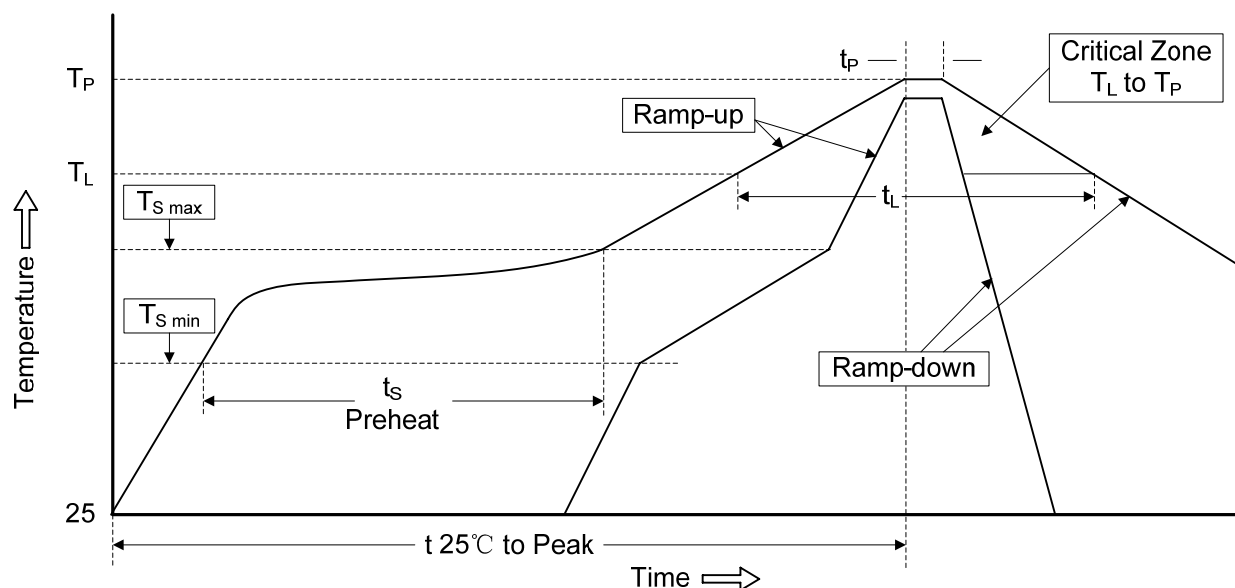


Test circuit according to MIL-883E method 3015.7



ESD surge according to MIL-883E method 3015.7

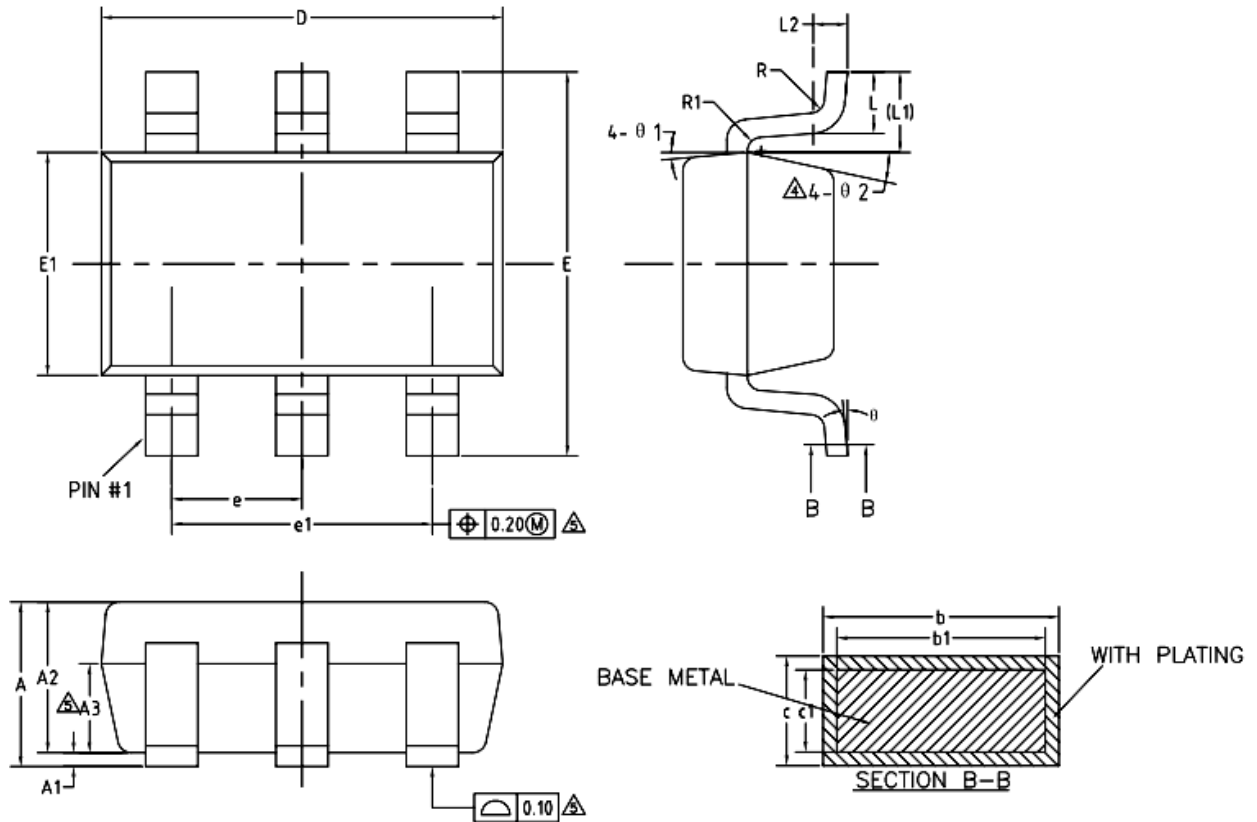
Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

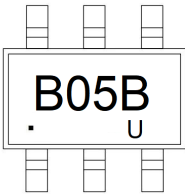
SOT23-6



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	—	—	1.25
A1	0	—	0.15
A2	1.00	1.10	1.20
A3	0.60	0.65	0.70
b	0.36	—	0.50
b1	0.36	0.38	0.45
c	0.14	—	0.20
c1	0.14	0.15	0.16
D	2.826	2.926	3.026
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
R	0.10	—	—
R1	0.10	—	0.20
θ	0°	—	8°
$\theta 1$	3°	5°	7°
$\theta 2$	6°	—	14°

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW UDT26A05L05UL	SOT23-6	3000	Tape and reel