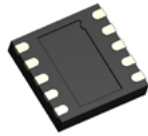


STN265033U380

TVS Diode array ESD suppressor



Product features

- 450 Watts peak pulse power per line ($t_p = 8/20 \mu s$)
- Protects four I/O lines and one V_{CC} line
- Low clamping voltage
- Ultra low capacitance: $<3 \text{ pF}$ for high-speed interfaces
- Working voltage: 3.3 V
- Low leakage current
- Meets moisture sensitivity level (MSL) 3
- Molding compound flammability rating: UL 94V-0
- Termination finish: Ni/Pd/Au

Applications

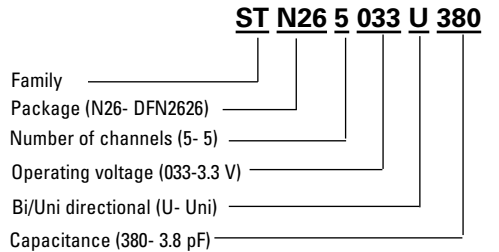
- USB interfaces
- 10/100/1000 ethernet
- DVI interfaces
- Wireless data (WAN/LAN) systems
- Analog video
- T1/E1 secondary protection
- T3/E3 secondary protection

Environmental compliance and general specifications

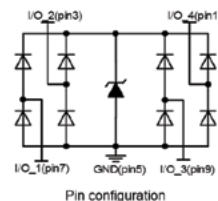
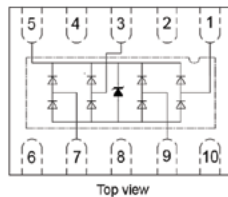
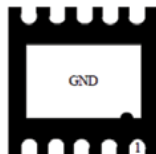
- IEC61000-4-2 (ESD)
 - $\pm 30 \text{ kV}$ (air)
 - $\pm 30 \text{ kV}$ (contact)
- IEC61000-4-5 (Lightning) 25 A (8/20 μs)



Ordering part number



Pin out/functional diagram



Absolute maximum ratings

(+25 °C, RH=45%-75%, unless otherwise noted)

STN265033U380

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	450	W
ESD per IEC 61000-4-2 (Air)	V_{ESD}	+/-30	kV
ESD per IEC 61000-4-2 (Contact)		+/-30	
Lead soldering temperature	T_L	+260 (10 seconds)	°C
Operating junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +150	°C

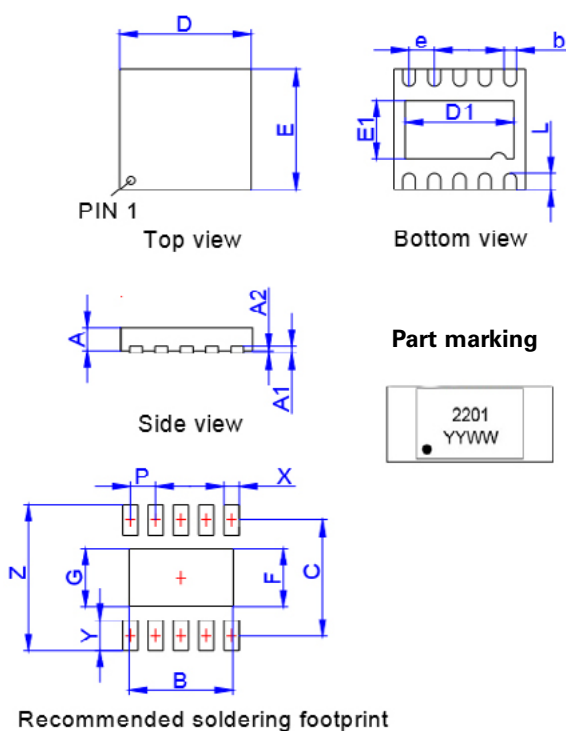
Electrical characteristics

(+25 °C)

STN265033U380

Parameter	Test condition	Minimum	Typical	Maximum	Symbol (Units)
Reverse working voltage	Any pin to ground	-	-	3.3	V_{RWM} (V)
Reverse breakdown voltage	$I_r = 1$ mA pin to ground	3.7	-	-	V_{BR} (V)
Reverse holding voltage	$I_h = 50$ mA	3.5	-	-	V_h (V)
Reverse leakage current	$V_{RWM} = 3.3$ V	-	-	0.1	I_R (μA)
Clamping voltage	$I_{PP} = 5$ A, $t_p = 8/20$ μs I/O pin to GND	-	-	10	V_c (V)
	$I_{PP} = 25$ A, $t_p = 8/20$ μs I/O pin to GND	-	-	16	V_c (V)
Junction capacitance	$V_{RWM} = 0$ V, $f = 1$ MHz Between I/O pins	-	2	-	C_j (pF)
	$V_{RWM} = 0$ V, $f = 1$ MHz I/O pin to GND	-	3.8	5	C_j (pF)

Mechanical parameters, pad layout- mm/inches

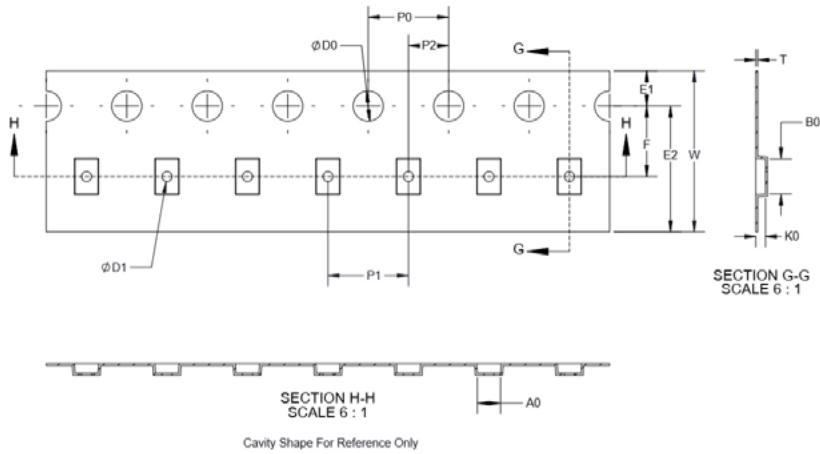


Dimension	Millimeters			Inches		
	Minimum	Typical	Maximum	Minimum	Typical	Maximum
D	2.55	2.60	2.65	0.100	0.102	0.104
E	2.55	2.60	2.65	0.100	0.102	0.104
D1	2.10	2.15	2.20	0.083	0.085	0.087
E1	1.21	1.26	1.31	0.048	0.050	0.052
L	0.30	0.35	0.40	0.012	0.014	0.016
b	0.20	0.25	0.30	0.008	0.010	0.012
e	0.50 BSC			0.020 BSC		
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.15 REF			0.006 REF		
A2	0.00	0.02	0.05	0.000	0.001	0.002
B	2.05			0.081		
C	2.50			0.098		
F	1.26			0.050		
G	1.85			0.073		
P	0.50			0.020		
X	0.30			0.012		
Y	0.65			0.026		
Z	3.15			0.124		

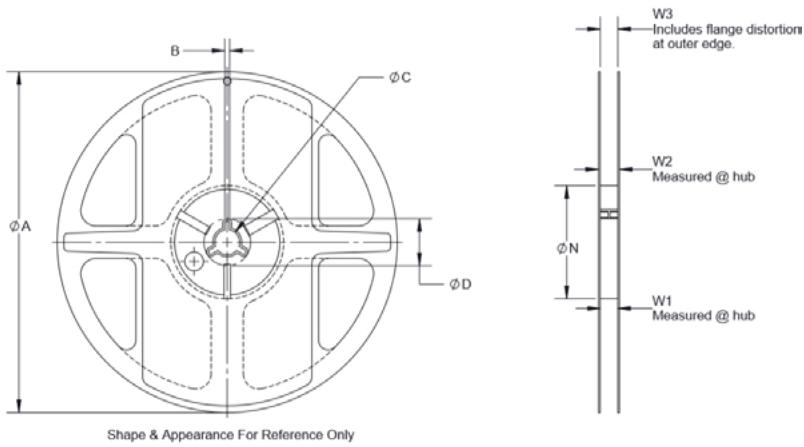
Packaging information mm/inches

Drawing not to scale.

Supplied in tape and reel packaging, 3,000 parts per 7" diameter reel (EIA-481 compliant)



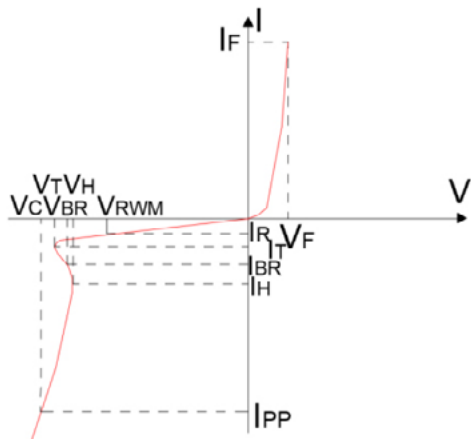
W	8.00
F	3.50
E1	1.75
E2	N/A
P0	4.00
P1	4.00
P2	2.00
ØD0	1.50
ØD1	N/A
A0	2.73
B0	2.78
K0	0.97
T	N/A



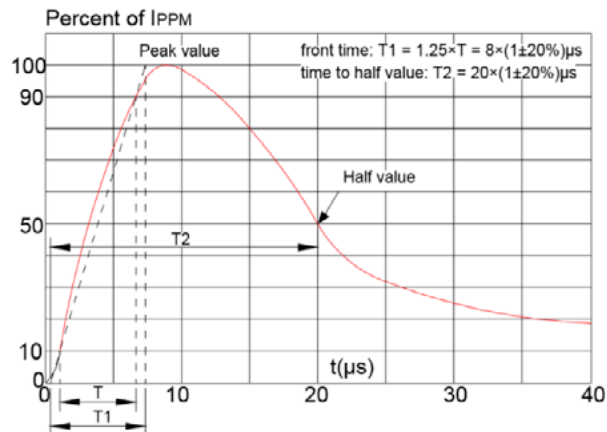
A	178.00
B	N/A
C	13.00
D	N/A
N	54.40
W1	9.50
W2	12.30
W3	N/A

Ratings and V-I characteristic curves (+25 °C unless otherwise noted)

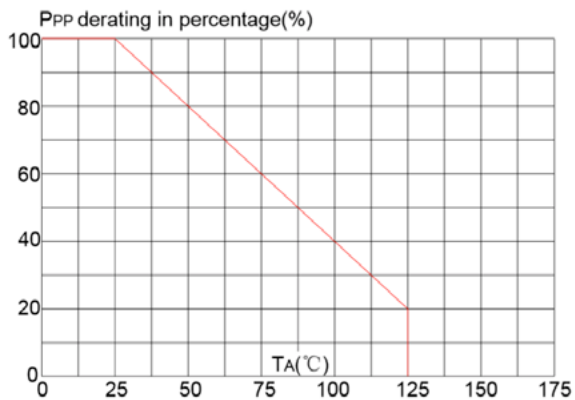
V- I curve characteristics (Uni-directional)



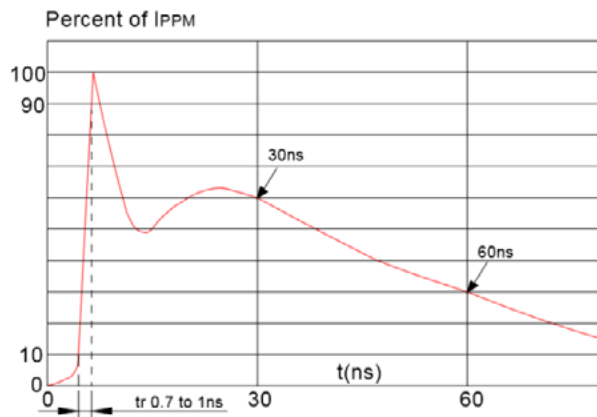
Pulse waveform (8/20 μs)



Pulse derating curve



ESD waveform



Solder reflow profile



Table 1 - Standard SnPb solder (T_C)

Package thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2 - Lead (Pb) free solder (T_C)

Package thickness	Volume mm ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 – 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Reference J-STD-020

Profile feature	Standard SnPb solder	Lead (Pb) free solder
Preheat and soak		
• Temperature min. (T _{smin})	100 °C	150 °C
• Temperature max. (T _{smax})	150 °C	200 °C
• Time (T _{smin} to T _{smax}) (t _s)	60-120 seconds	60-120 seconds
Ramp up rate T _L to T _p	3 °C/ second max.	3 °C/ second max.
Liquidous temperature (T _L)	183 °C	217 °C
Time (t _L) maintained above T _L	60-150 seconds	60-150 seconds
Peak package body temperature (T _p)*	Table 1	Table 2
Time (t _p)* within 5 °C of the specified classification temperature (T _C)	20 seconds*	30 seconds*
Ramp-down rate (T _p to T _L)	6 °C/ second max.	6 °C/ second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com/electronics

© 2020 Eaton
All Rights Reserved
Printed in USA
Publication No. 11144 BU-MC20126
September 2020

Eaton is a registered trademark.
All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:

Click to view products by [Eaton](#) manufacturer:

Other Similar products are found below :

[60KS200C](#) [D12V0H1U2WS-7](#) [D18V0L1B2LP-7B](#) [82356050220](#) [D5V0M5U6V-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE39CA-TP](#)
[P6KE8.2A](#) [SA110CA](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#) [SMBJ8.0A](#) [SMLJ30CA-TP](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#)
[ESD119B1W01005E6327XTSA1](#) [ESD5V0L1B02VH6327XTSA1](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-HF](#) [3.0SMCJ33CA-F](#)
[3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [DESD5V0U1BL-7B](#) [DRTR5V0U4SL-7](#) [SCM1293A-04SO](#)
[ESD200-B1-CSP0201 E6327](#) [ESD203-B1-02EL E6327](#) [SM12-7](#) [SMF8.0A-TP](#) [SMLJ45CA-TP](#) [CEN955 W/DATA](#) [82350120560](#)
[82356240030](#) [VESD12A1A-HD1-GS08](#) [CPDUR5V0R-HF](#) [CPDUR24V-HF](#) [CPDQC5V0U-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#)
[D1213A-01LP4-7B](#) [D1213A-02WL-7](#) [ESDLIN1524BJ-HQ](#) [5KP100A](#) [5KP15A](#)