

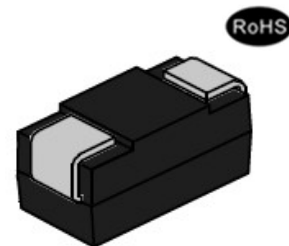


10BJxx(C)A-AU Series 1000W Transient Voltage Suppressor

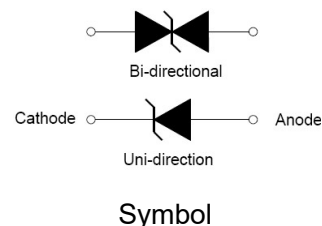
Rev.1.0

DESCRIPTION

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, telecommunications and intelligent control systems.



SMB



FEATURES

- ✧ Low profile package.
- ✧ Low inductance.
- ✧ Excellent clamping capability.
- ✧ 1000W peak pulse power capability at 10/1000 μ s waveform.
- ✧ Typical I_R less than 1 μ A above 10V.
- ✧ Fast response time: typically less than 1.0ps from 0V to V_{BR} min.
- ✧ High temperature to reflow soldering: 260 $^{\circ}$ C/40s at terminals.
- ✧ Plastic package has underwriters laboratory flammability 94V-0.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260 $^{\circ}$ C.
- ✧ Terminal: solder plated, solderable per J-STD-002.
- ✧ IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact).
- ✧ For surface mounted applications in order to optimize board space.
- ✧ High reliability application and automotive grade (AEC-Q101 qualified).

ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}$ C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage operating junction temperature range	T_{STG}/T_J	-55 to +150	$^{\circ}$ C
Steady state power dissipation at $T_L=75^{\circ}$ C	$P_{M(AV)}$	5.0	W
Peak pulse power dissipation at 10/1000 μ s waveform	P_{PP}	1000	W
Maximum instantaneous forward voltage at 50A for unidirectional	V_F	3.5	V
Peak forward surge current, 8.3ms single half sine wave(Note 1)	I_{FSM}	120	A
Typical thermal resistance junction to lead	$R_{\theta JL}$	20	$^{\circ}$ C/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	100	$^{\circ}$ C/W

Notes:

1. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

MARKING



C10: Device Marking Code
2236: the 36th week, 2022

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}^{\text{①}}$
Uni-Polar	Bi-Polar	Uni	Bi	V	max(μA)	min(V)	max(V)	mA	max(V)	A
10BJ10A-AU	10BJ10CA-AU	A10	C10	10.0	2	11.10	12.30	1	17.0	58.9
10BJ11A-AU	10BJ11CA-AU	A11	C11	11.0	1	12.20	13.50	1	18.2	55.0
10BJ12A-AU	10BJ12CA-AU	A12	C12	12.0	1	13.30	14.70	1	19.9	50.3
10BJ13A-AU	10BJ13CA-AU	A13	C13	13.0	1	14.40	15.90	1	21.5	46.6
10BJ14A-AU	10BJ14CA-AU	A14	C14	14.0	1	15.60	17.20	1	23.2	43.1
10BJ15A-AU	10BJ15CA-AU	A15	C15	15.0	1	16.70	18.50	1	24.4	41.0
10BJ16A-AU	10BJ16CA-AU	A16	C16	16.0	1	17.80	19.70	1	26.0	38.5
10BJ17A-AU	10BJ17CA-AU	A17	C17	17.0	1	18.90	20.90	1	27.6	36.3
10BJ18A-AU	10BJ18CA-AU	A18	C18	18.0	1	20.00	22.10	1	29.2	34.3
10BJ20A-AU	10BJ20CA-AU	A20	C20	20.0	1	22.20	24.50	1	32.4	30.9
10BJ22A-AU	10BJ22CA-AU	A22	C22	22.0	1	24.40	26.90	1	35.5	28.2
10BJ24A-AU	10BJ24CA-AU	A24	C24	24.0	1	26.70	29.50	1	38.9	25.7
10BJ26A-AU	10BJ26CA-AU	A26	C26	26.0	1	28.90	31.90	1	42.1	23.8
10BJ28A-AU	10BJ28CA-AU	A28	C28	28.0	1	31.10	34.40	1	45.4	22.1
10BJ30A-AU	10BJ30CA-AU	A30	C30	30.0	1	33.30	36.80	1	48.4	20.7
10BJ33A-AU	10BJ33CA-AU	A33	C33	33.0	1	36.70	40.60	1	53.3	18.8
10BJ36A-AU	10BJ36CA-AU	A36	C36	36.0	1	40.00	44.20	1	58.1	17.2
10BJ40A-AU	10BJ40CA-AU	A40	C40	40.0	1	44.40	49.10	1	64.5	15.5
10BJ43A-AU	10BJ43CA-AU	A43	C43	43.0	1	47.80	52.80	1	69.4	14.4
10BJ45A-AU	10BJ45CA-AU	A45	C45	45.0	1	50.00	55.30	1	72.7	13.8
10BJ48A-AU	10BJ48CA-AU	A48	C48	48.0	1	53.30	58.90	1	77.4	13.0
10BJ51A-AU	10BJ51CA-AU	A51	C51	51.0	1	56.70	62.70	1	82.4	12.2
10BJ54A-AU	10BJ54CA-AU	A54	C54	54.0	1	60.00	66.30	1	87.1	11.5

ELECTRICAL CHARACTERISTICS (T_A=25°C, continued)

Part Number		Marking		V _R	I _R @V _R	V _{BR} @I _T		I _T	V _C @I _{PP}	I _{PP} ^①
Uni-Polar	Bi-Polar	Uni	Bi	V	max(μA)	min(V)	max(V)	mA	max(V)	A
10BJ58A-AU	10BJ58CA-AU	A58	C58	58.0	1	64.40	71.20	1	93.6	10.7
10BJ60A-AU	10BJ60CA-AU	A60	C60	60.0	1	66.70	73.70	1	96.8	10.3
10BJ64A-AU	10BJ64CA-AU	A64	C64	64.0	1	71.10	78.60	1	103.0	9.7
10BJ70A-AU	10BJ70CA-AU	A70	C70	70.0	1	77.80	86.00	1	113.0	8.9
10BJ75A-AU	10BJ75CA-AU	A75	C75	75.0	1	83.30	92.10	1	121.0	8.3
10BJ78A-AU	10BJ78CA-AU	A78	C78	78.0	1	86.70	95.80	1	126.0	7.9
10BJ85A-AU	10BJ85CA-AU	A85	C85	85.0	1	94.40	104.0	1	137.0	7.3
10BJ90A-AU	10BJ90CA-AU	A90	C90	90.0	1	100.0	111.0	1	146.0	6.9
10BJ100A-AU	10BJ100CA-AU	A100	C100	100.0	1	111.0	123.0	1	162.0	6.2
10BJ110A-AU	10BJ110CA-AU	A110	C100	110.0	1	122.0	135.0	1	177.0	5.6
10BJ120A-AU	10BJ120CA-AU	A120	C120	120.0	1	133.0	147.0	1	193.0	5.2
10BJ130A-AU	10BJ130CA-AU	A130	C130	130.0	1	144.0	159.0	1	209.0	4.8
10BJ150A-AU	10BJ150CA-AU	A150	C150	150.0	1	167.0	185.0	1	243.0	4.2
10BJ160A-AU	10BJ160CA-AU	A160	C160	160.0	1	178.0	197.0	1	259.0	3.9
10BJ170A-AU	10BJ170CA-AU	A170	C170	170.0	1	189.0	209.0	1	275.0	3.7
10BJ180A-AU	10BJ180CA-AU	A180	C180	180.0	1	201.0	222.0	1	292.0	3.5
10BJ190A-AU	10BJ190CA-AU	A190	C190	190.0	1	211.0	234.0	1	307.0	3.3
10BJ200A-AU	10BJ200CA-AU	A200	C200	200.0	1	224.0	247.0	1	324.0	3.1

① Surge waveform: 10/1000μs

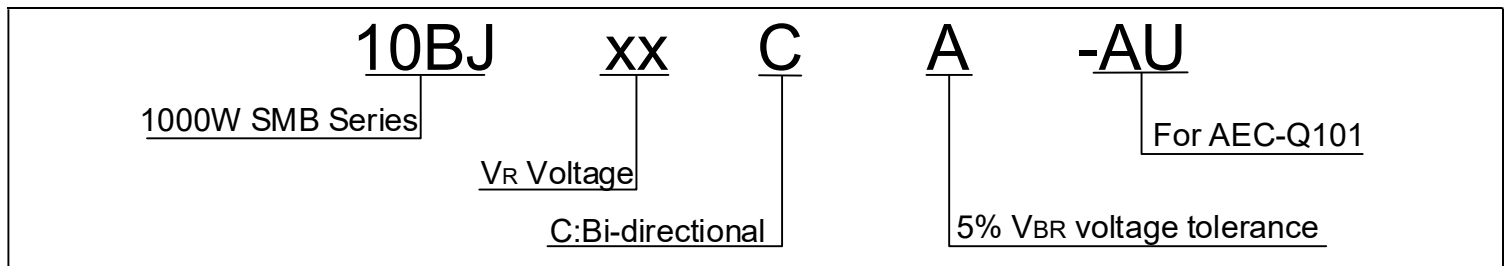
V_R: Stand-off voltage -- Maximum voltage that can be applied

V_{BR}: Breakdown voltage

V_C: clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

I_R: Reverse leakage current

ORDERING INFORMATION



RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1:V- I curve characteristics (Uni-directional)

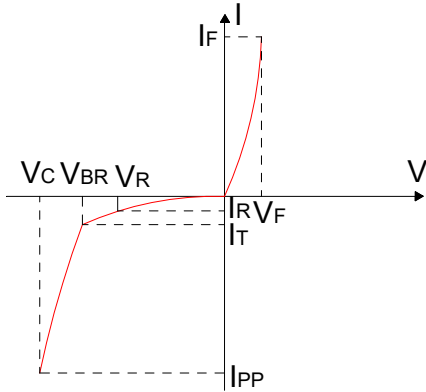


FIG.2:V- I curve characteristics (Bi-directional)

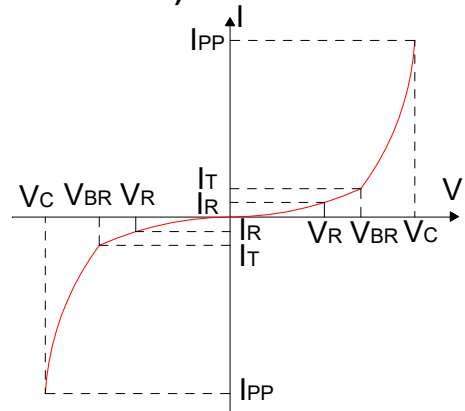


FIG.3: Pulse waveform

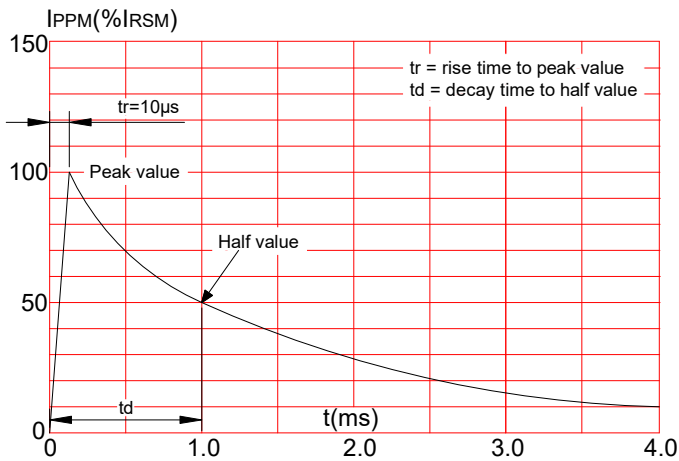


FIG.4: Pulse derating curve

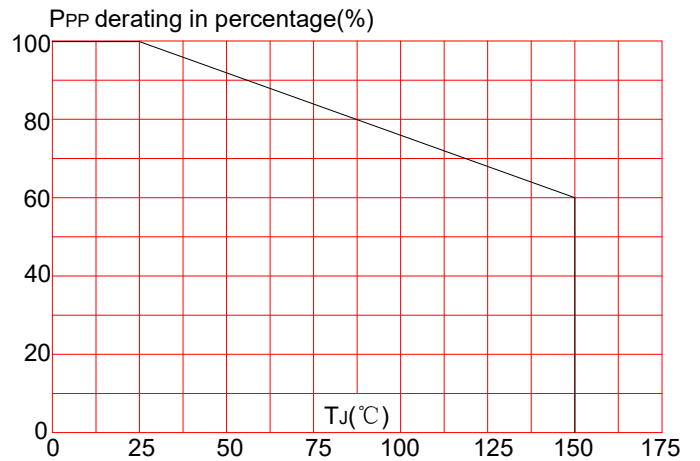
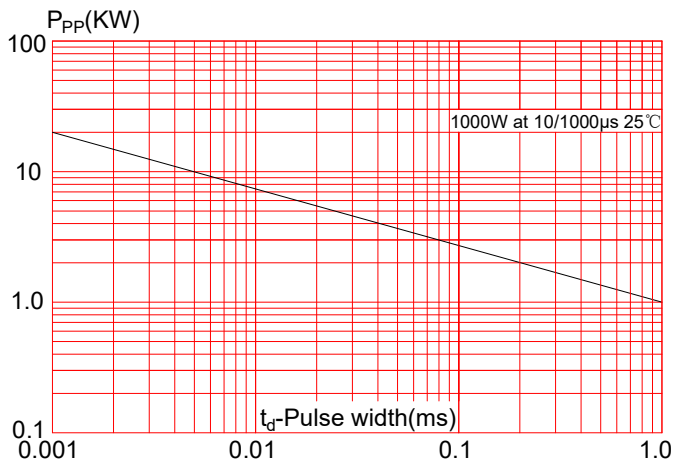
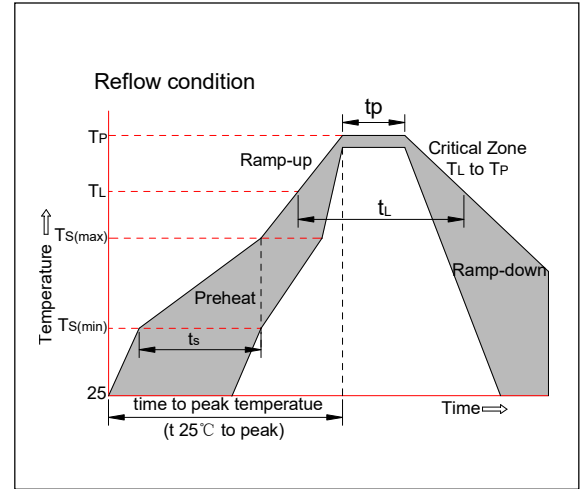


FIG.5:Peak pulse power dissipation vs. pulse width

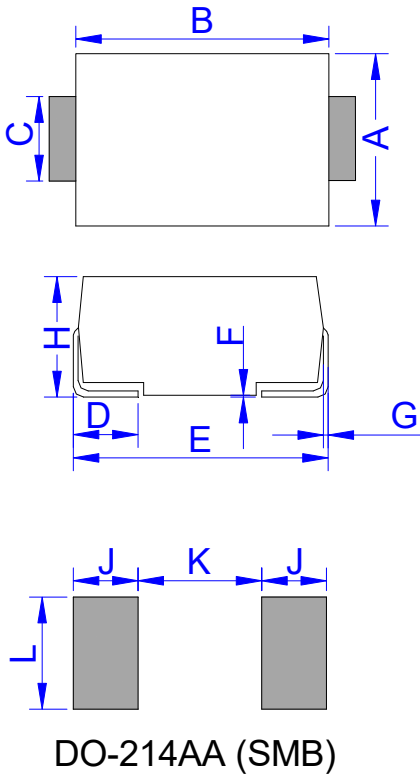


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C

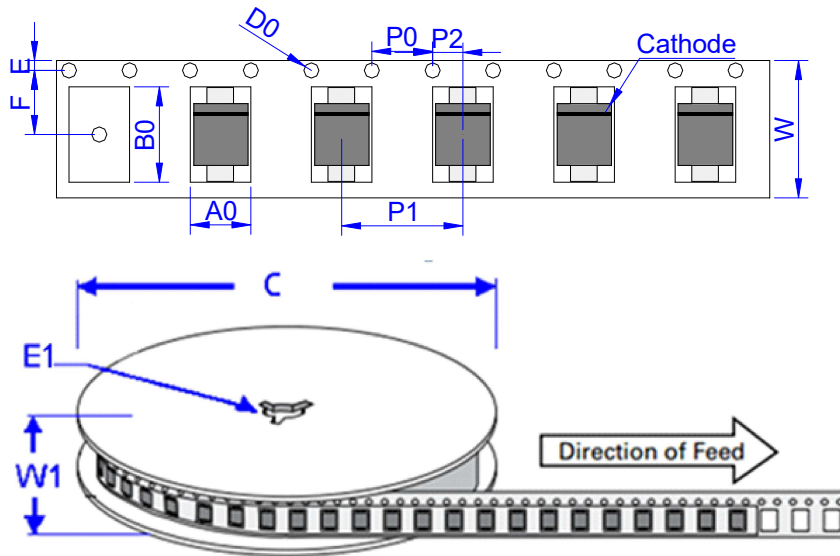


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

TAPE AND REEL SPECIFICATION-SMB



Ref.	Dimensions	
	Millimeters	Inches
A0	3.76 ± 0.3	0.148 ± 0.012
B0	5.69 ± 0.3	0.224 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	8.00 ± 0.2	0.3145 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
10BJxxA/CA-AU	0.098	3,000	48,000	13 inch reel pack

JieJie products are not designed for, and shall not be used for, any purpose (including, without limitation, automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable JieJie product documentation. Warranties granted by JieJie shall be deemed void for products used for any purpose not expressly set forth in applicable JieJie documentation. JieJie shall not be liable for any claims or damages arising out of products used in applications not expressly intended by JieJie as set forth in applicable JieJie documentation. The sale and use of JieJie products is subject to JieJie terms and conditions of sale, unless otherwise agreed by JieJie.

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.

This document is the first version which is made in 23-Sept.-2022. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.

Copyright ©2022 Jiangsu JieJie Microelectronics Co., Ltd. Printed All rights reserved.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JW\(捷捷微\)](#)