SZCJ

SMBG Plastic-Encapsulate Diodes

CJSMBJ SERIES Transient Voltage Suppressor Diodes

Features

- P_{PP} 600W
- V_{RWM} 5V- 220V
- Glass passivated chip

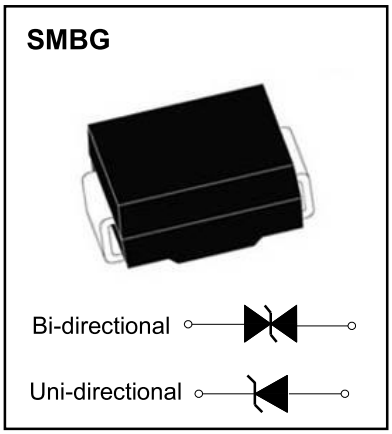
Applications

- Clamping Voltage

Marking



Cathode Band:for uni-directional products only
B**CA = Device code, **=Voltage
C:Bi-directional or not
XXXX=Data Code



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak pulse power dissipation	P_{PPM}	W	with a 10/1000us waveform	600
Peak pulse current(note 1)	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Power dissipation	P_D	W	On infinite heat sink at T_L=50℃	5.0
Peak forward surge current	I_{FSM}	A	8.3 ms single half sine-wave uni-directional only (note 2)	100
Operating junction and storage temperature range	T_J,T_{STG}	℃		-55 to +150

Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Maximum instantaneous forward Voltage	V_F	V	at 50A for uni-directional only	3.5
Thermal resistance	$R_{\theta JL}$	℃/W	junction to lead T_L=50℃	20
	$R_{\theta JA}$	℃/W	junction to ambient T_A=25℃	100

Notes:

(1) Non-repetitive current pulse, per Fig. 3 and derated above TA= 25℃per Fig.2
(2) 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minutes maximum

Typical Characteristics

Part Number		Device Marking Code		Breakdown Voltage VBR@IT		Test Current	Max Reverse Leakage @V_{RWM}	Reverse Standoff Voltage	Max Peak Pulse Current(1)	Max Clamping Voltage @I_{PP}
UNI	BI	UNI	BI	Min.(V)	Max.(V)	IT(mA)	I_R (uA)	V_{RWM}(V)	I_{PP}(A)	V_C(V)
CJSMBJ5.0A	CJSMBJ5.0CA	B5.0A XXXX	B5.0CA XXXX	6.40	7.00	10	800	5.0	65.22	9.2
CJSMBJ6.0A	CJSMBJ6.0CA	B6.0A XXXX	B6.0CA XXXX	6.67	7.37	10	800	6.0	58.25	10.3
CJSMBJ6.5A	CJSMBJ6.5CA	B6.5A XXXX	B6.5CA XXXX	7.22	7.98	10	500	6.5	53.57	11.2
CJSMBJ7.0A	CJSMBJ7.0CA	B7.0A XXXX	B7.0CA XXXX	7.78	8.60	10	200	7.0	50.00	12.0
CJSMBJ7.5A	CJSMBJ7.5CA	B7.5A XXXX	B7.5CA XXXX	8.33	9.21	1	100	7.5	46.51	12.9
CJSMBJ8.0A	CJSMBJ8.0CA	B8.0A XXXX	B8.0CA XXXX	8.89	9.83	1	50	8.0	44.12	13.6
CJSMBJ8.5A	CJSMBJ8.5CA	B8.5A XXXX	B8.5CA XXXX	9.44	10.40	1	20	8.5	41.67	14.4
CJSMBJ9.0A	CJSMBJ9.0CA	B9.0A XXXX	B9.0CA XXXX	10.00	11.10	1	10	9.0	38.96	15.4
CJSMBJ10A	CJSMBJ10CA	B10A XXXX	B10CA XXXX	11.10	12.30	1	5	10	35.29	17.0
CJSMBJ11A	CJSMBJ11CA	B11A XXXX	B11CA XXXX	12.20	13.50	1	5	11	32.97	18.2
CJSMBJ12A	CJSMBJ12CA	B12A XXXX	B12CA XXXX	13.30	14.70	1	5	12	30.15	19.9
CJSMBJ13A	CJSMBJ13CA	B13A XXXX	B13CA XXXX	14.40	15.90	1	5	13	27.91	21.5
CJSMBJ14A	CJSMBJ14CA	B14A XXXX	B14CA XXXX	15.60	17.20	1	5	14	25.86	23.2
CJSMBJ15A	CJSMBJ15CA	B15A XXXX	B15CA XXXX	16.70	18.50	1	5	15	24.59	24.4
CJSMBJ16A	CJSMBJ16CA	B16A XXXX	B16CA XXXX	17.80	19.70	1	5	16	23.08	26.0
CJSMBJ17A	CJSMBJ17CA	B17A XXXX	B17CA XXXX	18.90	20.90	1	5	17	21.74	27.6
CJSMBJ18A	CJSMBJ18CA	B18A XXXX	B18CA XXXX	20.00	22.10	1	5	18	20.55	29.2
CJSMBJ20A	CJSMBJ20CA	B20A XXXX	B20CA XXXX	22.20	24.50	1	5	20	18.52	32.4
CJSMBJ22A	CJSMBJ22CA	B22A XXXX	B22CA XXXX	24.40	26.90	1	5	22	16.90	35.5
CJSMBJ24A	CJSMBJ24CA	B24A XXXX	B24CA XXXX	26.70	29.50	1	5	24	15.42	38.9

Typical Characteristics

Part Number		Device Marking Code		Breakdown Voltage VBR@IT		Test Current	Max Reverse Leakage @V_{RWM}	Reverse Standoff Voltage	Max Peak Pulse Current(1)	Max Clamping Voltage @I_{PP}
UNI	BI	UNI	BI	Min.(V)	Max.(V)	IT(mA)	I_R (uA)	V_{RWM}(V)	I_{PP}(A)	V_C(V)
CJSMBJ26A	CJSMBJ26CA	B26A XXXX	B26CA XXXX	28.90	31.90	1	5	26	14.25	42.1
CJSMBJ28A	CJSMBJ28CA	B28A XXXX	B28CA XXXX	31.10	34.40	1	5	28	13.22	45.4
CJSMBJ30A	CJSMBJ30CA	B30A XXXX	B30CA XXXX	33.30	36.80	1	5	30	12.40	48.4
CJSMBJ33A	CJSMBJ33CA	B33A XXXX	B33CA XXXX	36.70	40.60	1	5	33	11.26	53.3
CJSMBJ36A	CJSMBJ36CA	B36A XXXX	B36CA XXXX	40.00	44.20	1	5	36	10.33	58.1
CJSMBJ40A	CJSMBJ40CA	B40A XXXX	B40CA XXXX	44.40	49.10	1	5	40	9.30	64.5
CJSMBJ43A	CJSMBJ43CA	B43A XXXX	B43CA XXXX	47.80	52.80	1	5	43	8.65	69.4
CJSMBJ45A	CJSMBJ45CA	B45A XXXX	B45CA XXXX	50.00	55.30	1	5	45	8.25	72.7
CJSMBJ48A	CJSMBJ48CA	B48A XXXX	B48CA XXXX	53.30	58.90	1	5	48	7.75	77.4
CJSMBJ51A	CJSMBJ51CA	B51A XXXX	B51CA XXXX	56.70	62.70	1	5	51	7.28	82.4
CJSMBJ54A	CJSMBJ54CA	B54A XXXX	B54CA XXXX	60.00	66.30	1	5	54	6.89	87.1
CJSMBJ58A	CJSMBJ58CA	B58A XXXX	B58CA XXXX	64.40	71.20	1	5	58	6.41	93.6
CJSMBJ60A	CJSMBJ60CA	B60A XXXX	B60CA XXXX	66.70	73.70	1	5	60	6.20	96.8
CJSMBJ64A	CJSMBJ64CA	B64A XXXX	B64CA XXXX	71.10	78.60	1	5	64	5.83	103.0
CJSMBJ70A	CJSMBJ70CA	B70A XXXX	B70CA XXXX	77.80	86.00	1	5	70	5.31	113.0
CJSMBJ75A	CJSMBJ75CA	B75A XXXX	B75CA XXXX	83.30	92.10	1	5	75	4.96	121.0
CJSMBJ78A	CJSMBJ78CA	B78A XXXX	B78CA XXXX	86.70	95.80	1	5	78	4.76	126.0
CJSMBJ80A	CJSMBJ80CA	B80A XXXX	B80CA XXXX	88.80	97.60	1	5	80	4.63	129.6
CJSMBJ85A	CJSMBJ85CA	B85A XXXX	B85CA XXXX	94.40	104.00	1	5	85	4.38	137.0
CJSMBJ90A	CJSMBJ90CA	B90A XXXX	B90CA XXXX	100.00	111.00	1	5	90	4.11	146.0

Typical Characteristics

Part Number		Device Marking Code		Breakdown Voltage VBR@IT		Test Current	Max Reverse Leakage @V_{RWM}	Reverse Standoff Voltage	Max Peak Pulse Current(1)	Max Clamping Voltage @I_{PP}
UNI	BI	UNI	BI	Min.(V)	Max.(V)	IT(mA)	I_R (uA)	V_{RWM}(V)	I_{PP}(A)	V_C(V)
CJSMBJ100A	CJSMBJ100CA	B100A XXXX	B100CA XXXX	111.00	123.00	1	5	100	3.70	162.0
CJSMBJ110A	CJSMBJ110CA	B110A XXXX	B110CA XXXX	122.00	135.00	1	5	110	3.39	177.0
CJSMBJ120A	CJSMBJ120CA	B120A XXXX	B120CA XXXX	133.00	147.00	1	5	120	3.11	193.0
CJSMBJ130A	CJSMBJ130CA	B130A XXXX	B130CA XXXX	144.00	159.00	1	5	130	2.87	209.0
CJSMBJ150A	CJSMBJ150CA	B150A XXXX	B150CA XXXX	167.00	185.00	1	5	150	2.47	243.0
CJSMBJ160A	CJSMBJ160CA	B160A XXXX	B160CA XXXX	178.00	197.00	1	5	160	2.32	259.0
CJSMBJ170A	CJSMBJ170CA	B170A XXXX	B170CA XXXX	189.00	209.00	1	5	170	2.18	275.0
CJSMBJ180A	CJSMBJ180CA	B180A XXXX	B180CA XXXX	200.00	220.00	1	5	180	2.06	291.0
CJSMBJ190A	CJSMBJ190CA	B190A XXXX	B190CA XXXX	211.00	232.00	1	5	190	1.95	307.0
CJSMBJ200A	CJSMBJ200CA	B200A XXXX	B200CA XXXX	224.00	247.00	1	5	200	1.85	324.0
CJSMBJ220A	CJSMBJ220CA	B220A XXXX	B220CA XXXX	246.00	272.00	1	5	220	1.69	356.0

Notes:

(1) Waveform of CJSMBJ5.0A -CJSMBJ220CA are defined as per fig.3

Typical Characteristics

Figure 1. Peak Pulse Power Rating Curve

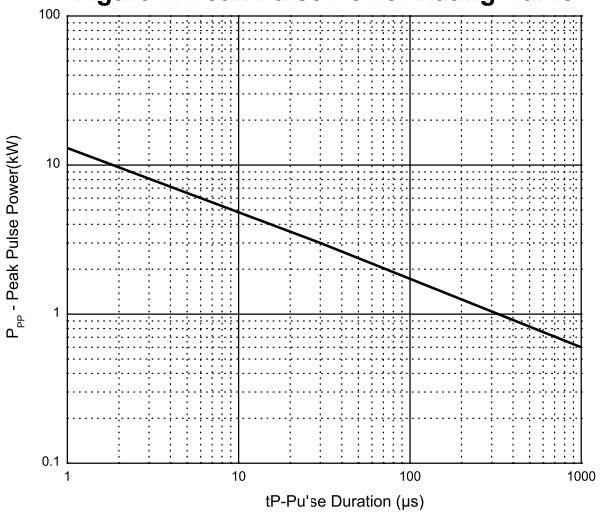


Figure 2. Pulse Derating Curve

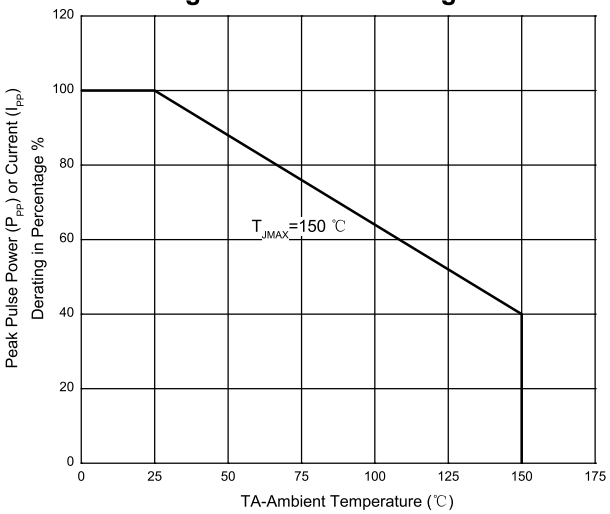


Figure 3. Pulse Waveform

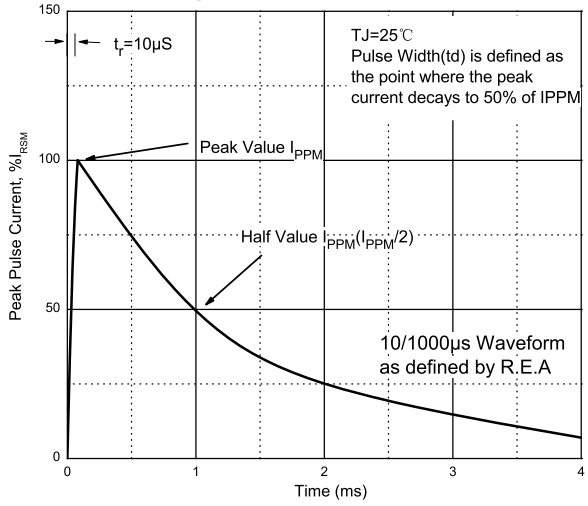


Figure 4. Typical Junction Capacitance

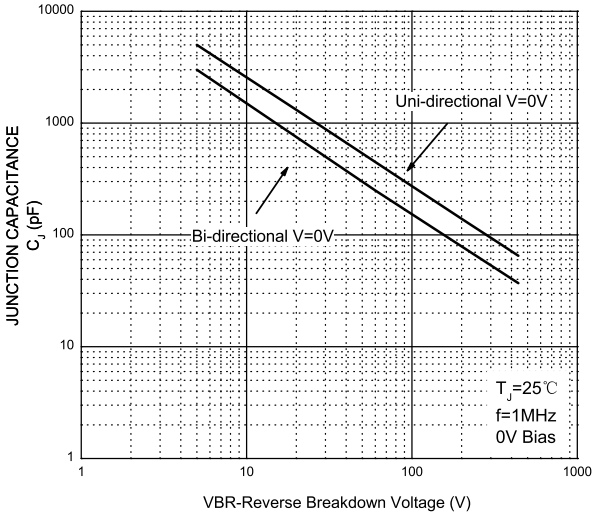


Figure 5. Steady State Power Dissipation Derating Curve

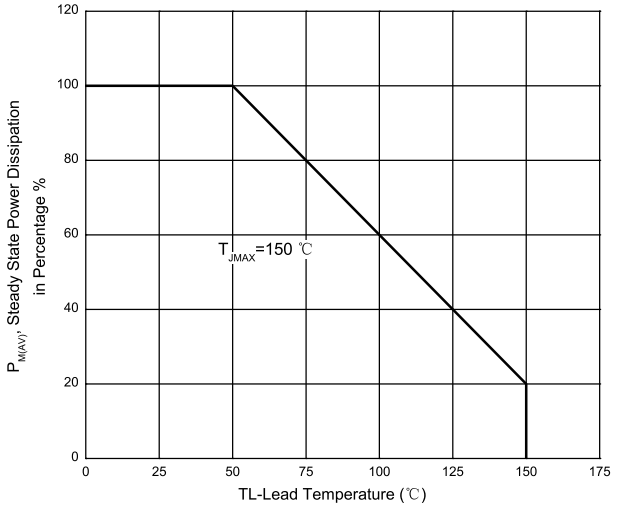
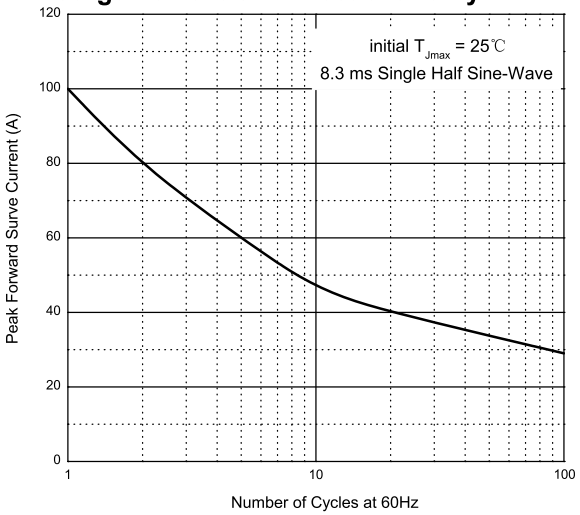
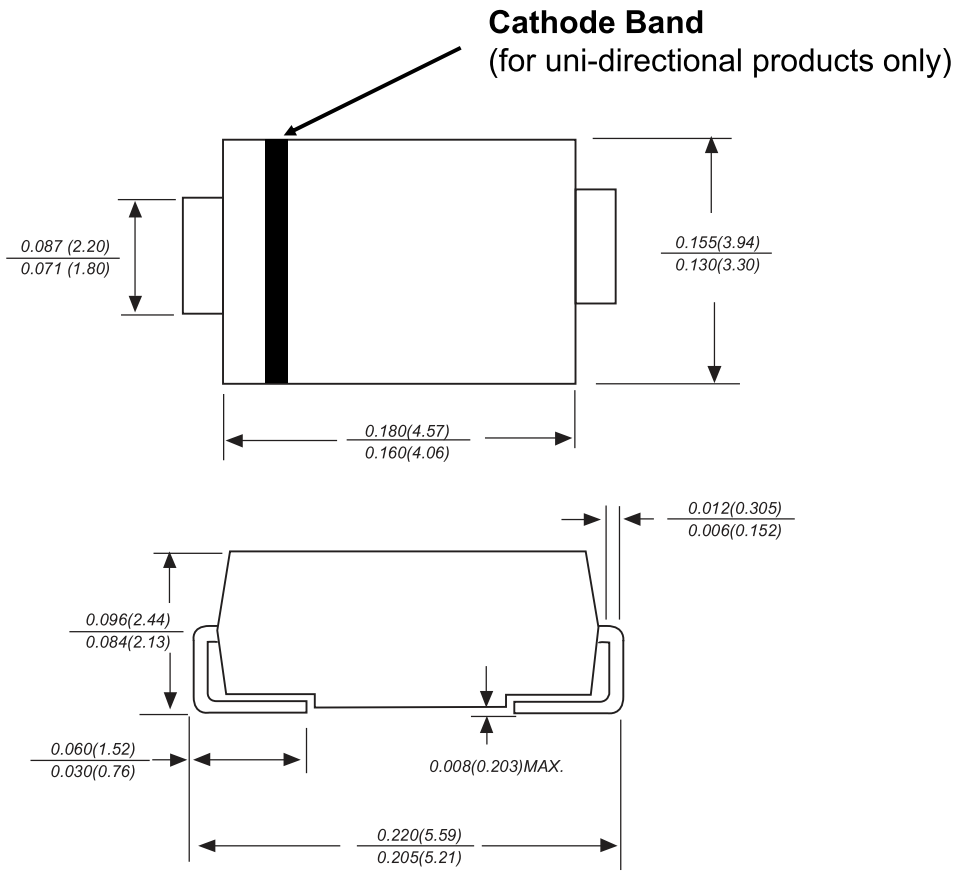


Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

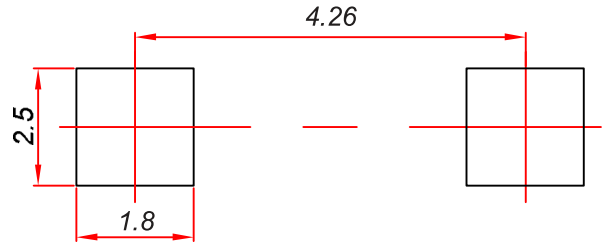


SMBG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMBG Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

NOTICE
serves the right to make modifications,enhancements,improvements,corrections or other
without further notice to any product herein.JSCJ does not assume any liability arising
e application or use of any product described herein.

Reel Taping Specifications For Surface Mount Devices- SMBG

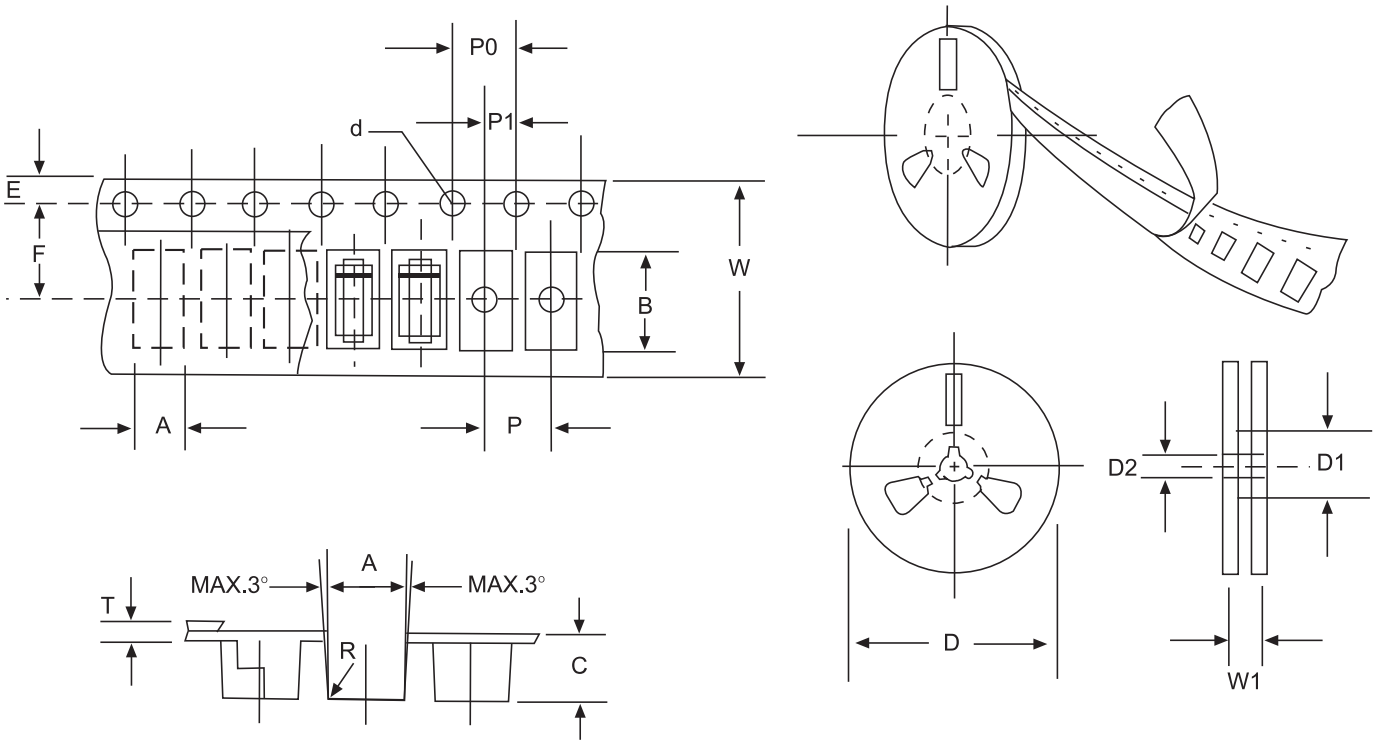


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMBG mm(inch)
Carrier width	A	4.09±0.1(0.161±0.004)
Carrier length	B	5.82±0.1(0.229±0.004)
Carrier depth	C	2.50±0.1(0.100±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	330±2.0(13±0.079)
Reel inner diameter	D1	75±1.0(2.95±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.65±0.05(0.222±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.32±0.1(0.013±0.004)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE:Devices are packed in accordance with EIA standard RS-481-A and specification given above.