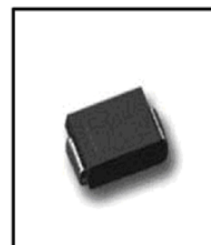


特性/机械性能:
FEATURES/MECHANICAL DATA

- ◆ 600W 峰值脉冲功率 600W peak pulse power capability
- ◆ 优良的箝制能力 Excellent clamping capability
- ◆ 较小的箝位因子 Smaller clamping factor
- ◆ 快速响应时间: 从: 0 v到 VBR, 单向型小于1.0ps, 双向型小于5.0ns
Fast response time: typically less than 1.0ps from 0v to VBR for unidirectional and 5.0ns for bidirectional types.
- ◆ 耐焊接热: 250℃/10S, 引出端1.5mm处Resistance to soldering heat:250 °C /10S,terminal1.5mm.
- ◆ 封装: 模塑封装 Case: Molded plastic
- ◆ 塑封材料: 用UL94V-0认可的阻燃环氧料 Epoxy: UL94V-0 rate flame retardant
- ◆ 端子: 镀锡,无铅 Terminals: Pure tin plated, lead free
- ◆ 极性: 色带表示阴极, Polarity: Color band denotes cathode except Bipolar
- ◆ 安装位置: 任意 Mounting position: Any



SMB/DO-214AA

最大额定值及电气特性:
MAXIMUM RATINGS AND CHARACTERISTICS

测量环境温度为25℃, 除非另有规定。

Rating at 25℃ ambient temperature unless otherwise specified.

参数名称 Part Number	符号Symbol	额定值 Value	单位Unit
最大峰值脉冲功率 Peak power dissipation	Pppm	最小 (Min) 600	W
最大峰值反向脉冲电流 (注释1) Peak pulse reverse current (Note 1)	Ippm	见表 (See Table)	A
稳态功率 (注释2) Steady state power dissipation (Note 2)	Pm(AV)	2.0	W
最大峰值正向浪涌电流(注释3) 仅对单向型 Maximum Peak Forward surge Current (Note 3)For unidirectional only	IFSM	100.0	A
最大瞬态正向电压 @ 50A 仅对单向型 (注释4) Maximum instantaneous forward voltage @ 50A, For unidirectional only(Note 4)	VF	3.5/5.0	V
工作及储存温度 Operating and Storage Temperature Range	TJ,TSTG	-55~+150	℃

注 释: NOTES:

1. 脉冲电流时间10 / 1000μs. 10 / 1000μs waveform non-repetitive current pulse
2. 在引线末端安装面积为5.0mm², 厚0.013mm的散热铜片,Ta=75℃.
Mounted on copper pad area of (5×5×0.013mm), Ta=75℃.
3. 使用单相正弦半波, 时间10ms; 或使用等效的方波, 4周波/分。
Measured on 10ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
4. SMBJ5.0V~SMBJ90V的产品VF≤3.5v, SMBJ90V~SMBJ170V的产品VF≤5.0v
VF=3.5V max. for devices of 5.0V≤V(BR) ≤90V, and VF≤ 5.0V max. for devices of V(BR)>90V

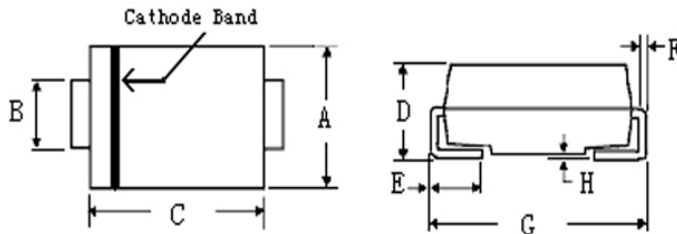
双向型器件应用说明:DEVICES FOR BIDIRECTIONAL APPLICATIONS :

- 1.在型号名称后注有C 或CA , 表示双向型。For bidirectional use C or CA suffix for types
- 2.电气特性适用于两个方向。Electrical characteristics apply in both directions.

产品外形尺寸:

PRODUCT APPEARANCE SIZE

SMB/DO-214AA



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.132	0.144	3.35	3.65
B	0.073	0.085	1.85	2.15
C	0.167	0.179	4.25	4.55
D	0.083	0.098	2.10	2.50
E	0.031	0.055	0.80	1.40
F	0.006	0.011	0.15	0.29
G	0.199	0.211	5.05	5.35
H		0.008		0.203

电特性:

ELECTRICAL CHARACTERISTICS

型号 Device Type	标识代码 Marking		击穿电压 Breakdown Voltage(Note1)		测试电流 Test Current	变位电压 Stand-off Voltage	最大反向漏电流 @V _{WM} Maximum Reverse leakage @V _{WM}	最大峰值脉冲 浪涌电流 Maximum Peak Pulse Reverse Current	最大箝位电压 @I _{ppm} Maximum Clamping Voltage @I _{ppm}
	UNI-	BI-	V _(BR) (V) MIN	V _(BR) (V) MAX	I _T (mA)	V _{WM} (V)	I _D (μA) (Note2)	I _{ppm} (A)	V _C (V)
SMBJ5.0			6.40	7.30	10.0	5.0	800	65	9.60
SMBJ5.0A	KE	AE	6.40	7.00	10.0	5.0	800	68	9.20
SMBJ6.0			6.67	8.15	10.0	6.0	800	55	11.4
SMBJ6.0A	KG	AG	6.67	7.37	10.0	6.0	800	61	10.3
SMBJ6.5			7.22	8.82	10.0	6.5	500	51	12.3
SMBJ6.5A	KK	AK	7.22	7.98	10.0	6.5	500	56	11.2
SMBJ7.0			7.78	9.51	10.0	7.0	200	47	13.3
SMBJ7.0A	KM	AM	7.78	8.60	10.0	7.0	200	52	12.0
SMBJ7.5			8.33	10.3	1.0	7.5	100	44	14.3
SMBJ7.5A	KP	AP	8.33	9.21	1.0	7.5	100	48	12.9
SMBJ8.0			8.89	10.9	1.0	8.0	50	42	15.0
SMBJ8.0A	HR	AR	8.89	9.83	1.0	8.0	50	46	13.6
SMBJ8.5			9.44	11.5	1.0	8.5	20	39	15.9
SMBJ8.5A	KT	AT	9.44	10.4	1.0	8.5	20	43	14.4
SMBJ9.0			10.0	12.2	1.0	9.0	10	37	16.9
SMBJ9.0A	KV	AV	10.0	11.1	1.0	9.0	10	40	15.4
SMBJ10			11.1	13.6	1.0	10.0	5	33	18.8
SMBJ10A	KX	AX	11.1	12.3	1.0	10.0	5	37	17.0
SMBJ11			12.2	14.9	1.0	11.0	5	31	20.1
SMBJ11A	KZ	AZ	12.2	13.5	1.0	11.0	5	34	18.2
SMBJ12			13.3	16.3	1.0	12.0	5	28	22.0
SMBJ12A	LE	BE	13.3	14.7	1.0	12.0	5	31	19.9
SMBJ13			14.4	17.6	1.0	13.0	5	26	23.8
SMBJ13A	LG	BG	14.4	15.9	1.0	13.0	5	29	21.5
SMBJ14			15.6	19.1	1.0	14.0	5	24.4	25.8
SMBJ14A	LK	BK	15.6	17.2	1.0	14.0	5	27.0	23.2
SMBJ15			16.7	20.4	1.0	15.0	5	23.1	26.9
SMBJ15A	LM	BM	16.7	18.5	1.0	15.0	5	25.1	24.4

电特性:
ELECTRICAL CHARACTERISTICS

型 号 Device Type	标识代码 Marking		击穿电压 Breakdown Voltage(Note1)		测试电流 Test Current	变位电压 Stand-off Volage	最大反向漏电流 @V _{WM} Maximum Reverse leadage @V _{WM}	最大峰值脉冲 浪涌电流 Maximum Peak Pulse Reverse Current	最大箝位电压 @I _{ppm} Maximum Clamping Voltage @I _{ppm}
	UNI-	BI-	V (BR)(V) MIN	V (BR)(V) MAX	IT(mA)	V _{WM} (V)	ID(μA) (Note2)	I _{ppm} (A)	V _c (V)
SMBJ16			17.8	21.8	1.0	16.0	5	21.8	28.8
SMBJ16A	LP	BP	17.8	19.7	1.0	16.0	5	24.2	26.0
SMBJ17			18.9	23.1	1.0	17.0	5	20.0	30.5
SMBJ17A	LR	BR	18.9	20.9	1.0	17.0	5	22.8	27.6
SMBJ18			20.0	24.4	1.0	18.0	5	19.5	32.2
SMBJ18A	LT	BT	20.0	22.1	1.0	18.0	5	21.5	29.2
SMBJ20			22.2	27.1	1.0	20.0	5	17.6	35.8
SMBJ20A	LV	BV	22.2	24.5	1.0	20.0	5	19.4	32.4
SMBJ22			24.4	29.8	1.0	22.0	5	15.0	39.4
SMBJ22A	LX	BX	24.4	26.9	1.0	22.0	5	17.7	35.5
SMBJ24			26.7	32.6	1.0	24.0	5	14.6	43.0
SMBJ24A	LZ	BZ	26.7	29.5	1.0	24.0	5	16.0	38.9
SMBJ26			28.9	35.3	1.0	26.0	5	13.5	46.6
SMBJ26A	ME	CE	28.9	31.9	1.0	26.0	5	14.9	42.1
SMBJ28			31.1	38.0	1.0	28.0	5	12.6	50.0
SMBJ28A	MG	CG	31.1	34.4	1.0	28.0	5	13.8	45.4
SMBJ30			33.3	40.7	1.0	30.0	5	11.7	53.5
SMBJ30A	MK	CK	33.3	36.8	1.0	30.0	5	13.0	48.4
SMBJ33			36.7	44.9	1.0	33.0	5	10.6	59.0
SMBJ33A	MM	CM	36.7	40.6	1.0	33.0	5	11.8	53.3
SMBJ36			40.0	48.9	1.0	36.0	5	9.8	64.3
SMBJ36A	MP	CP	40.0	44.2	1.0	36.0	5	10.8	58.1
SMBJ40			44.4	54.3	1.0	40.0	5	8.8	71.4
SMBJ40A	MR	CR	44.4	49.1	1.0	40.0	5	9.7	64.5
SMBJ43			47.8	58.4	1.0	43.0	5	8.2	76.7
SMBJ43A	MT	CT	47.8	52.8	1.0	43.0	5	9.0	69.4
SMBJ45			50.0	61.1	1.0	45.0	5	7.8	80.3
SMBJ45A	MV	CV	50.0	55.3	1.0	45.0	5	8.6	72.7
SMBJ48			53.3	65.1	1.0	48.0	5	7.3	85.5
SMBJ48A	MX	CX	53.3	58.9	1.0	48.0	5	8.1	77.4
SMBJ51			56.7	69.3	1.0	51.0	5	6.9	91.1
SMBJ51A	MZ	CZ	56.7	62.7	1.0	51.0	5	7.6	82.4
SMBJ54			60.0	73.3	1.0	54.0	5	6.5	96.3
SMBJ54A	NE	DE	60.0	66.3	1.0	54.0	5	7.2	87.1
SMBJ58			64.4	78.7	1.0	58.0	5	6.1	103
SMBJ58A	NG	DG	64.4	71.2	1.0	58.0	5	6.7	93.6
SMBJ60			66.7	81.5	1.0	60.0	5	5.8	107
SMBJ60A	NK	DK	66.7	73.7	1.0	60.0	5	6.5	96.8
SMBJ64			71.1	86.9	1.0	64.0	5	5.5	114

电特性:
ELECTRICAL CHARACTERISTICS

型 号 Device Type	标识代码 Marking		击穿电压 Breakdown Voltage(Note1)		测试电流 Test Current	变位电压 Stand-off Volage	最大反向漏电流 @V _{WM} Maximum Reverse leadage @V _{WM}	最大峰值脉冲 浪涌电流 Maximum Peak Pulse Reverse Current	最大箝位电压 @I _{ppm} Maximum Clamping Voltage @I _{ppm}
	UNI-	BI-	V (BR)(V) MIN	V (BR)(V) MAX	IT(mA)	V _{WM} (V)	ID(μA) (Note2)	I _{ppm} (A)	V _c (V)
SMBJ64A	NM	DM	71.1	78.6	1.0	64.0	5	6.1	103
SMBJ70			77.8	95.1	1.0	70.0	5	5.0	125
SMBJ70A	NP	DP	77.8	86.0	1.0	70.0	5	5.5	113
SMBJ75			83.3	102	1.0	75.0	5	4.7	134
SMBJ75A	NR	DR	83.3	92.1	1.0	75.0	5	5.2	121
SMBJ78			86.7	106	1.0	78.0	5	4.5	139
SMBJ78A	NT	DT	86.7	95.8	1.0	78.0	5	5.0	126
SMBJ85			94.4	115	1.0	85.0	5	4.1	151
SMBJ85A	NV	DV	94.4	104	1.0	85.0	5	4.6	137
SMBJ90			100	122	1.0	90.0	5	3.9	160
SMBJ90A	NX	DX	100	111	1.0	90.0	5	4.3	146
SMBJ100			111	136	1.0	100	5	3.5	179
SMBJ100A	NZ	DZ	111	123	1.0	100	5	3.8	162
SMBJ110			122	149	1.0	110	5	3.2	196
SMBJ110A	PE	EE	122	135	1.0	110	5	3.5	177
SMBJ120			133	163	1.0	120	5	2.9	214
SMBJ120A	PG	EG	133	147	1.0	120	5	3.2	193
SMBJ130			144	176	1.0	130	5	2.7	231
SMBJ130A	PK	EK	144	159	1.0	130	5	3.0	209
SMBJ150			167	204	1.0	150	5	2.3	268
SMBJ150A	PM	EM	167	185	1.0	150	5	2.5	243
SMBJ160			178	218	1.0	160	5	2.2	287
SMBJ160A	PP	EP	178	197	1.0	160	5	2.4	259
SMBJ170			189	231	1.0	170	5	2.0	304
SMBJ170A	PR	ER	189	209	1.0	170	5	2.2	275

注 释：

1. V (BR) 值在施加IT 300μs后测量, IT 为方波或等效的脉冲波形。
2. 对于双向型, V_{RWM}在10V及10V以下, ID值加倍。

NOTES :

1. V (BR) measured after IT applide for 300μs, IT = suquare pulse or equivalent.
2. For bidirectional types having V_{RWM} of 10 volts and less, the ID limit is doubled.

特性曲线图:

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - PULSE DERATING CURVE

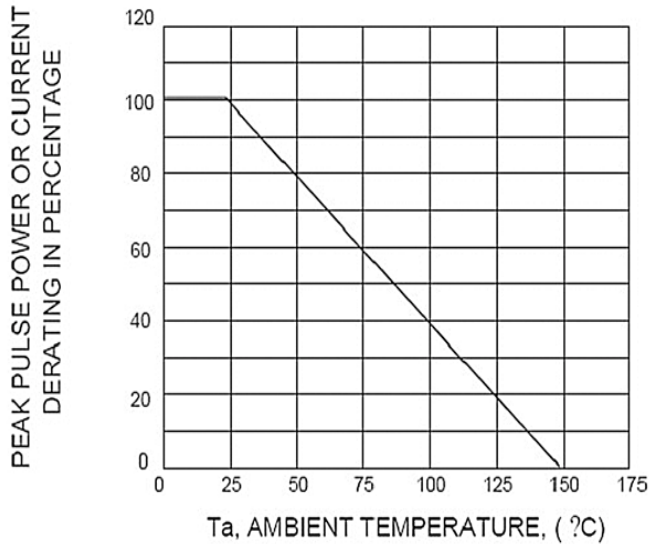


FIG.2 - TYPICAL JUNCTION CAPACITANCE

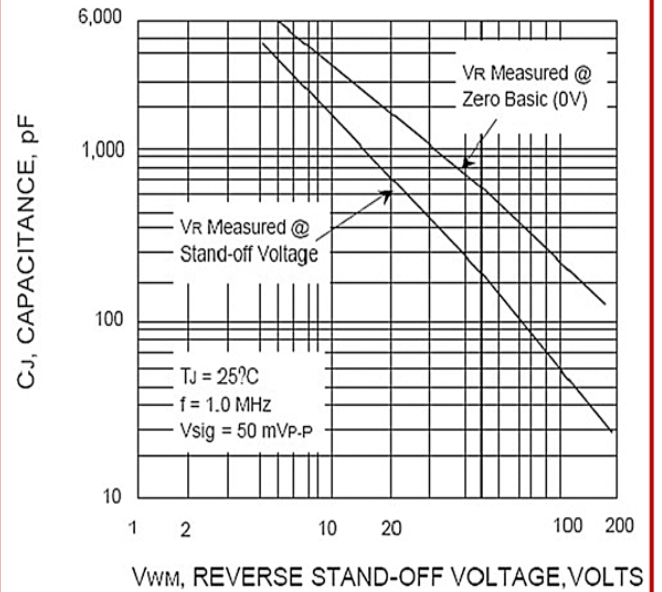


FIG.3 - PULSE WAVEFORM

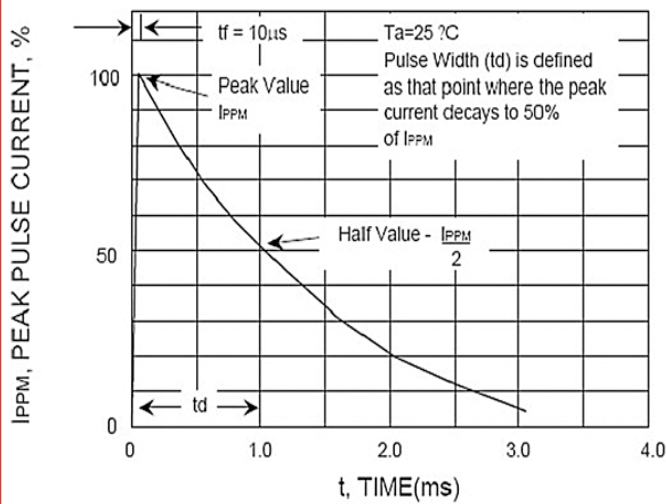


FIG.4 - PEAK PULSE POWER RATING CURVE

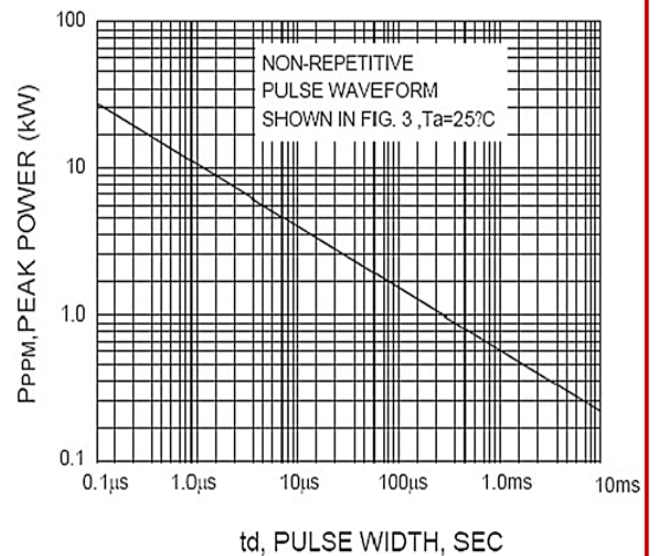


FIG.5 – TYPICAL TRANSIENT THERMAL IMPEDANCE

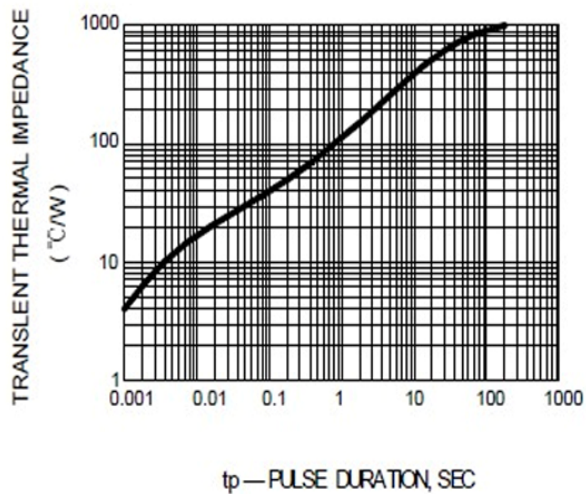


FIG.6 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

