



**summate**

森美特半導體股份有限公司

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# 产 品 承 认 书

产品类别：TVS瞬态抑制二极管

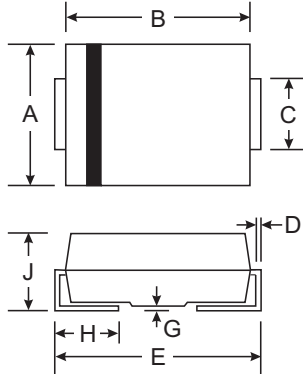
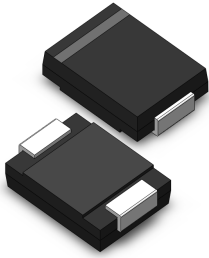
产品型号：SM15T36CA

修订部门：研发部

修订日期：2020-3-18

**一、 产品分类:**产品类别型号: SM15T36CA类别名称: 贴片TVS瞬态抑制二极管

■无铅产品

**二、 元器件封装外形尺寸图:**

SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

**三、 本体印字方式:**

名称	封装方式	本体印字	说明
SM15T36CA	DO-214AB/SMC	XXXX BFK	XXXX:生产周期 BFK : 本体代码

**四、 数据表:**1.极限值和温度特征       $T_A=25^{\circ}\text{C}$       除非有规定**Maximum Ratings** @  $T_A = 25^{\circ}\text{C}$  unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^{\circ}\text{C}$ ) (Note 1)	$P_{PK}$	1500	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	$I_{FSM}$	200	A
Steady State Power Dissipation @ $T_L = 75^{\circ}\text{C}$	$PM_{(AV)}$	5.0	W
Instantaneous Forward Voltage @ $I_{PP} = 100\text{A}$ (Notes 1 & 3)	$V_F$	See Note 5	V
Operating Temperature Range	$T_j$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +175	$^{\circ}\text{C}$

NOTES:1. Non-repetitive current pulse ,per Fig. 3 and derated above  $T_A=25^{\circ}\text{C}$  per Fig. 1.

2. Thermal Resistance junction to Lead.

3. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).



TYPE	Reverse Stand-Off Voltage	Breakdown Voltage Min. @ I <sub>T</sub>	Breakdown Voltage Max. @ I <sub>T</sub>	Test Current	Maximum Clamping Voltage @ I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @ V <sub>RWM</sub>
	V <sub>RWM</sub> (V)	V <sub>BR MIN</sub> (V)	V <sub>BR MAX</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (uA)
SM15T36CA	30.8	34.2	37.8	1.0	49.9	30.5	5.0

**Ratings and Characteristic Curves T<sub>A</sub>=25°C unless otherwise noted**

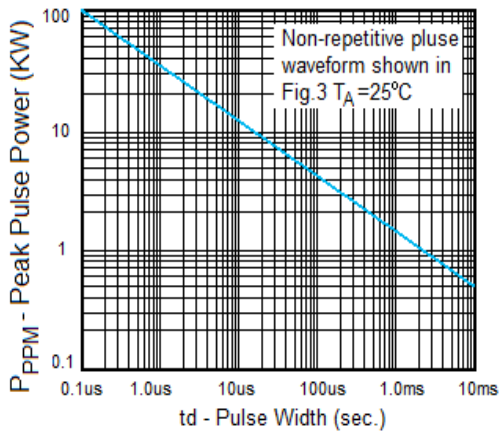


Fig. 1 Peak Pulse Power Rating

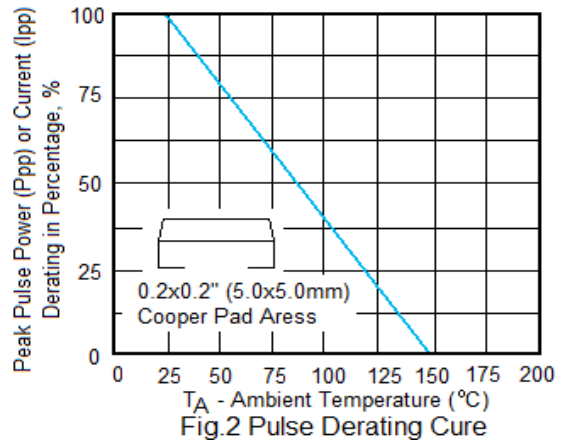


Fig.2 Pulse Derating Curve

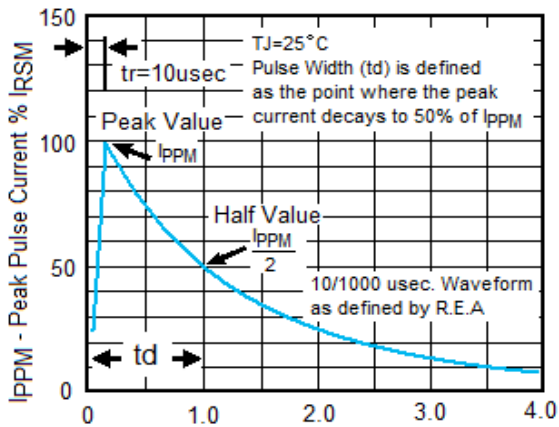


Fig.3 Pulse Waveform

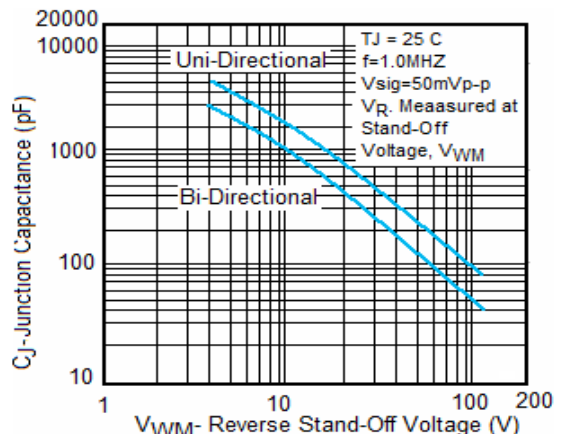
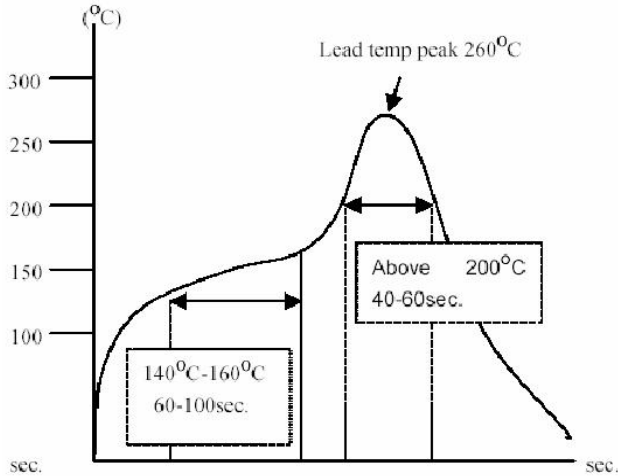


Fig. 4- Typical Junction Capacitance



3、回流焊的温度曲线



六、耐焊接热

温度  $280 \pm 5^\circ\text{C}$ ，时间 10 秒，测试 VZ、IR 符合规范要求。

七、元器件可靠性测试：

Reliability Test 可靠性测试	Test Conditions 测试条件	Sampling Plan 取样计划	Frequency 频率
Solderability Test 可焊性测试	Ta = $230 \pm 5^\circ\text{C}$ , time = 3-6sec.	Sample size : 10 pcs Acc: 0/1	每批次抽测一次
Marking Permanence 印字测试	Per as IEC 682-45 method 1, solvent: 1,1,1-TCE and ethanol	Sample size : 10 pcs Acc: 0/1	每天每台机抽测一次
Thermal Shock 热冲击	$0^\circ\text{C}$ , 1 minute; $100^\circ\text{C}$ , 3minute 10 cycles	Sample size : 20 pcs Acc: 0/1	各封装产品随机三个型号每月检测一次
High Temperature Storage Test 高温贮存测试	Ta= $150^\circ\text{C}$ , 1000 Hours	Sample size : 20 pcs Acc: 0/1	各封装产品随机三个型号每月检测一次
Continuous Operation Test (Zener Only) 长期工作寿命测试	Dc voltage applied on reverse bias at full power, 1000hours	Sample size : 20 pcs Acc: 0/1	各封装产品随机三个型号每月检测一次
High Temperature/Humidity Storage Test 恒温/ 恒湿测试	Ta= $65^\circ\text{C}$ , RH=98% 100hours	Sample size : 20 pcs Acc: 0/1	各封装产品随机三个型号每月检测一次
Pressure cooker 高压蒸煮	15 Psig , TA= $121^\circ\text{C}$ ,4H	Sample size : 20 pcs Acc: 0/1	各封装产品随机三个型号每月检测一次
Soldering Heat 耐焊接热	Ta= $260^\circ\text{C}$ , T=10s; Dipped up to a place 1-1.5mm apart from its body	Sample size : 20 pcs Acc: 0/1	各封装产品随机三个型号每月检测一次

八、包装

- a) 包装应防震、防潮、防压、无破损。
- c) 内包装有出厂检验合格证，生产日期、产品规格型号、内包装数量。
- d) 外包装上有制造厂名称、产品规格型号、内包装数量。