



**/ Descriptions**

50V~1000V                      5.0A    SMC

Surface Mount Ultrafast Recovery Rectifier,Reverse Voltage:50 to1000V,Forward Current:5.0A, SMC package.

**/ Features**

RoHS    2011/65/

Glass Passivated Chip Junction, High efficiency, Lead free in comply with EU R0HS 2011/65/EU directives, For surface mounted applications, Halogen free product.

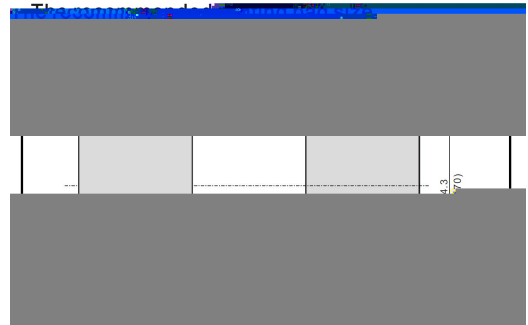
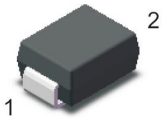
**/ Applications**

General purpose.

**/ Equivalent Circuit**

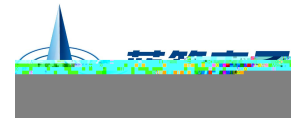


**/ Pinning**



**/ Marking**

See Marking Instructions.



/ Absolute Maximum Ratings(Ta=25 )

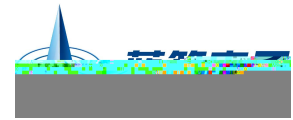
参数 Parameter	参数符号 Symbol	数值 Rating							单位 Unit
		US5AC	US5BC	US5DC	US5GC	US5JC	US5KC	US5MC	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_C=100^{\circ}C$	$I_{F(AV)}$	5.0							A
Typical Junction Capacitance at $V_R=4V, f=1MHz$	$C_j$	50							pF
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	120							A
Typical Thermal Resistance <sup>(1)</sup>	$R_{JA}$	35							$^{\circ}C/W$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55~+150							$^{\circ}C$

Note:

(1) P.C.B. mounted with 2.0 X 2.0" (5 X 5 cm) copper pad areass .

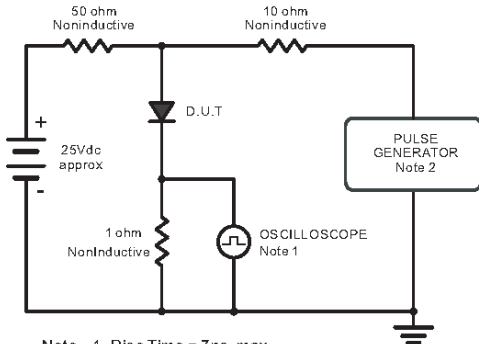
/ Electrical Characteristics(Ta=25 )

参数 Parameter	参数符号 Symbol	测试条件 Test condition	数值 Rating						单位 Unit
			US5AC	US5BC	US5DC	US5GC	US5JC	US5KC	
Maximum Instantaneous Forward Voltage	$V_F$	$I_F=5.0A$	1.0			1.3	1.65		V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	$I_R$	$T_a=25^{\circ}C$	5.0						uA
		$T_a=125^{\circ}C$	100						
Maximum Reverse Recovery Time	$T_{rr}$	$I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$	50			75		ns	



/ Electrical Characteristic Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7 ns, max.  
Input Impedance = 1 megohm, 22pF.  
2. Rise Time = 10 ns, max.  
Source Impedance = 50 ohms.

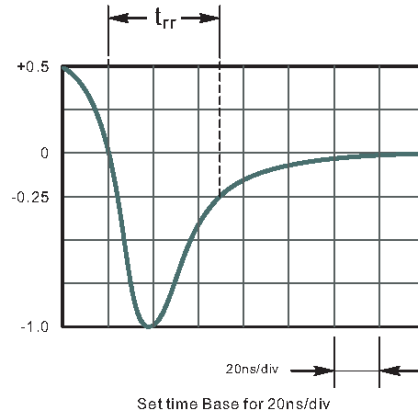


Fig.2 Maximum Average Forward Current Rating

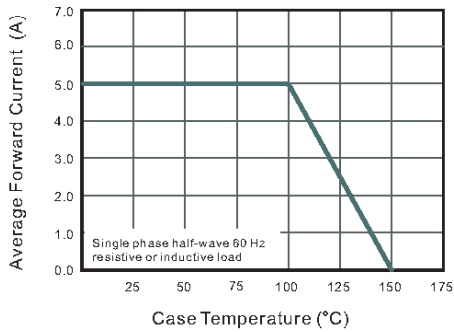


Fig.3 Typical Reverse Characteristics

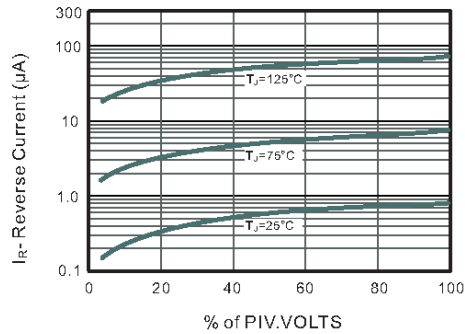


Fig.4 Typical Forward Characteristics

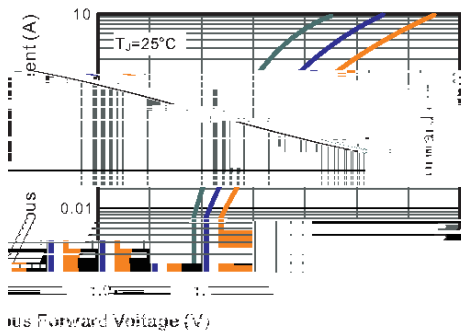
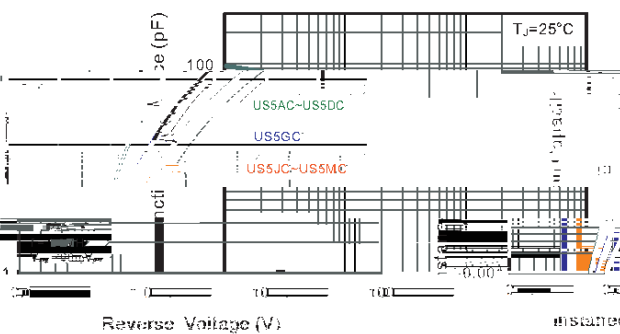


Fig.5 Typical Junction Capacitance



Maximum Non-Repetitive Peak and Surge Current

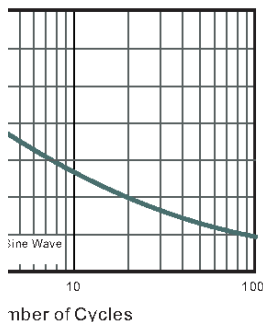
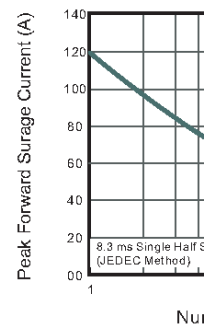
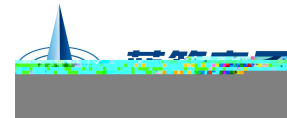


Fig.6 Maximum Peak Forward Surge Current





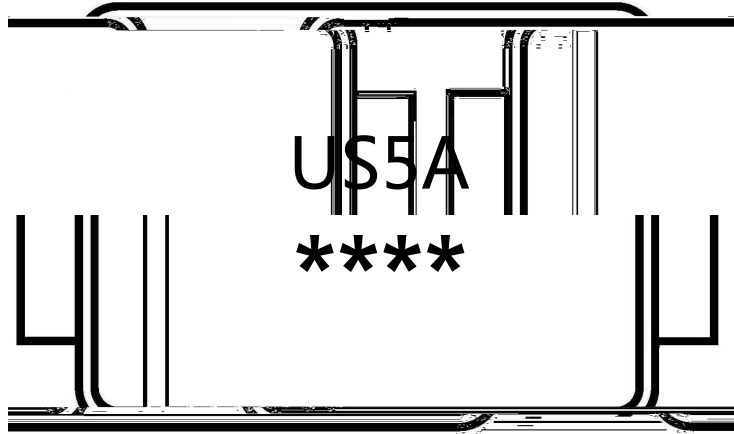


**/ Marking Instructions**

## Marking

Type number	Marking code
US5AC	US5A
US5BC	US5B
US5DC	US5D
US5GC	US5G
US5JC	US5J
US5KC	US5K
US5MC	US5M

/ Marking Instructions



US5A  
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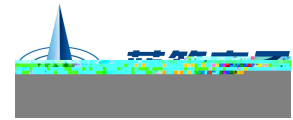
1

3

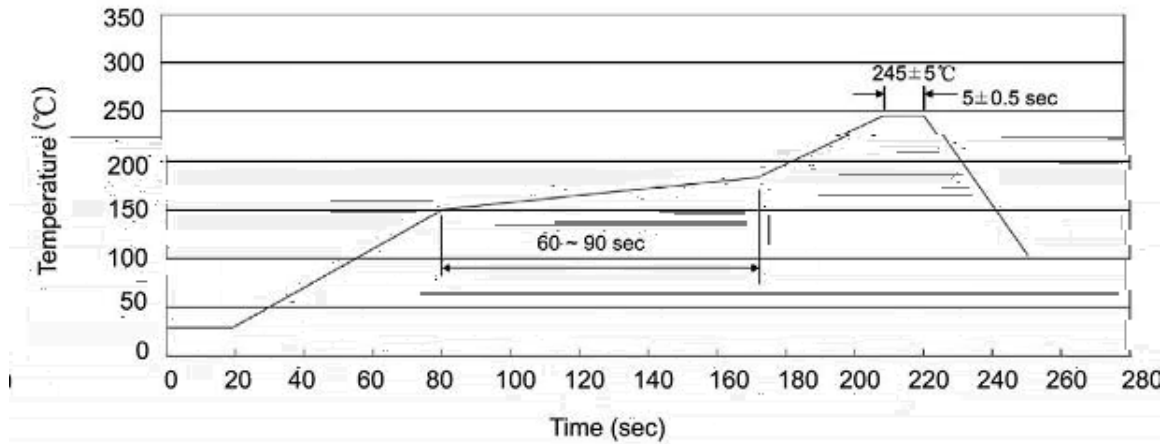
Note:

US5A Product Type Code

\*\*\*\* Lot No. Code The 1st means:YM Code The last 3 means:little Lot No Code



( ) /



Note:

- |   |       |     |           |        |  |
|---|-------|-----|-----------|--------|--|
| 1 | 150   | 180 | 60        | 90sec; | 1.Preheating:150~180°C, Time:60~90sec.   |
| 2 | 245±5 |     | 5±0.5sec; |        | 2.Peak Temp.:245±5°C, Duration:5±0.5sec. |
| 3 |       | 2   | 10°C/sec. |        | 3. Cooling Speed: 2~10°C/sec.            |

/ Resistance to Soldering Heat Test Conditions

260±5°C                      10±1 sec.                      Temp.:260±5°C                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box	Outer Box
SMC	3000	2	6000	6	36000	13" x16	337X337X49	380X335X366

/ Notices