

## Fast Recovery Rectifier

## RS5ACF - RS5GCF

### Features

- Low forward voltage drop
- High forward surge current capability
- Low-profile SMD ideal for automated manufacturing
- RoHS compliant with Halogen-free



### Mechanical Data

- Case: SMCF molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated; solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

### Maximum Ratings (@T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	RS5ACF	RS5BCF	RS5DCF	RS5GCF	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	V
RMS Reverse Voltage	V <sub>RMS</sub>	35	70	140	280	V
DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	V
Average Forward Output Current	I <sub>F(AV)</sub>	5.0				A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I <sub>FSM</sub>	150				A

### Thermal Characteristics

Parameter	Symbol	RS5ACF	RS5BCF	RS5DCF	RS5GCF	Unit
Typical Thermal Resistance *1	R <sub>θJA</sub>	27				°C/W
	R <sub>θJC</sub>	10				
	R <sub>θJL</sub>	4				
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~ +150				°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150				°C

Note \*1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

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# RS5ACF - RS5GCF

## Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

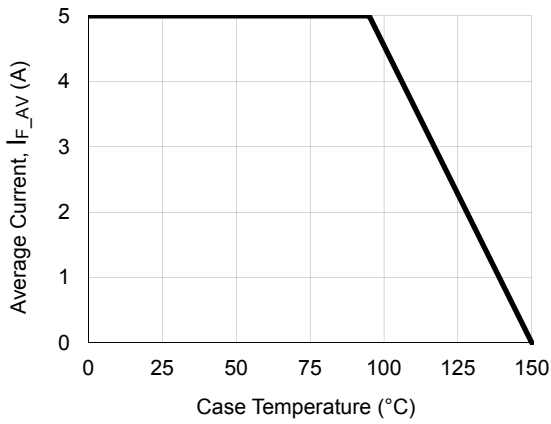
Parameter	Symbol	Test Condition	Typ.	Max.	Unit	
Instantaneous Forward Voltage	$V_F$	$I_F = 5.0\text{A}$	-	1.3	V	
Reverse Current	$I_R$	Rated	@ $T_A = 25^\circ\text{C}$	-	5	$\mu\text{A}$
		$V_R$	@ $T_A = 125^\circ\text{C}$	-	200	
Reverse Recovery Time	$t_{rr}$	$I_F = 0.5\text{A}$ , $I_{RM} = 1\text{A}$ , $I_{R(REC)} = 0.25\text{A}$	-	150	ns	

# Fast Recovery Rectifier

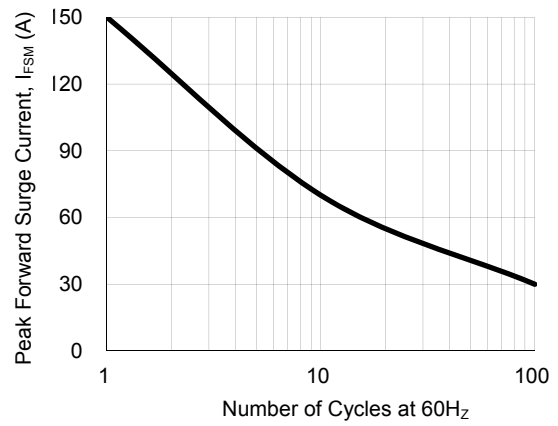
# RS5ACF - RS5GCF

## Ratings and Characteristic Curves (@T<sub>A</sub>=25°C unless otherwise noted)

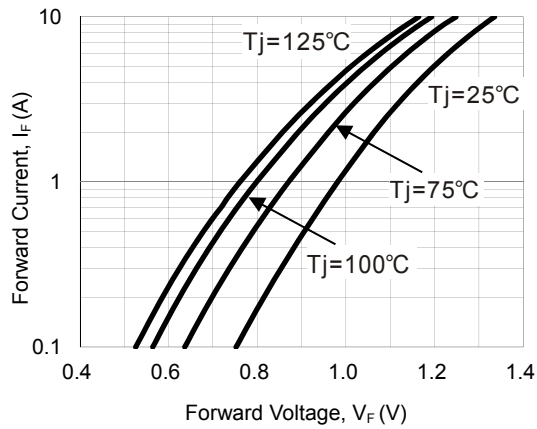
**Fig.1 Forward Current Derating Curve**



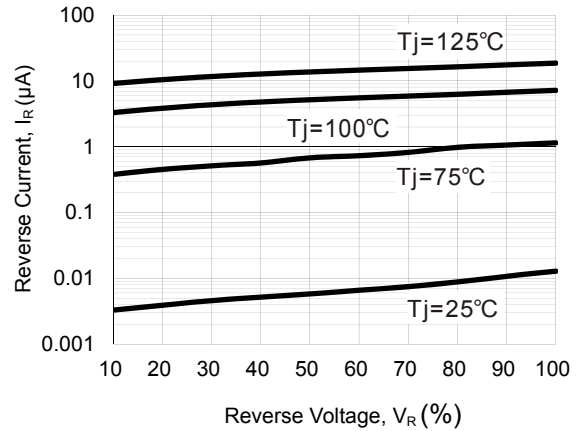
**Fig.2 Surge Current Derating Curve**



**Fig.3 Typical Forward Voltage Characteristics**



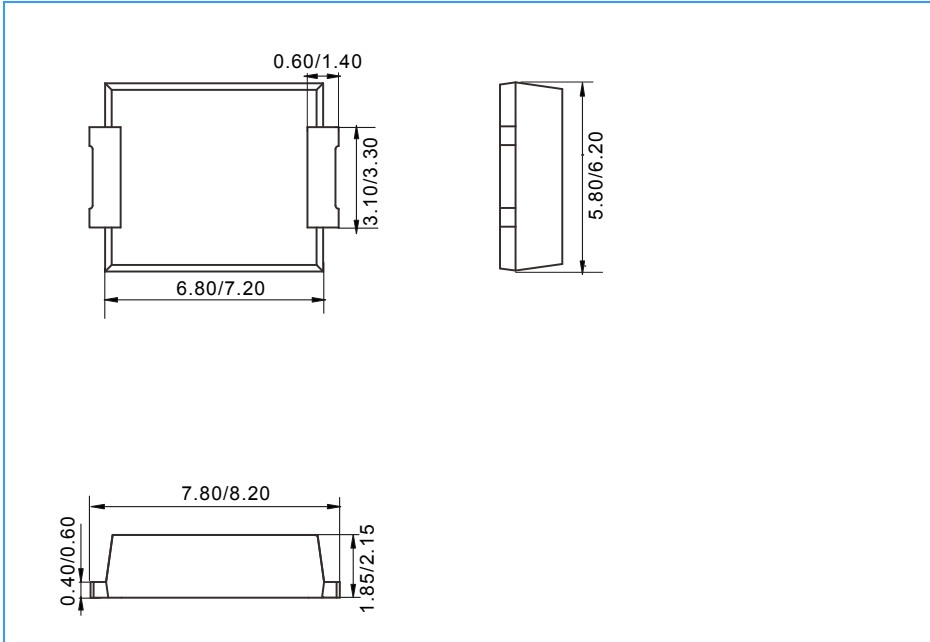
**Fig.4 Typical Reverse Characteristics**



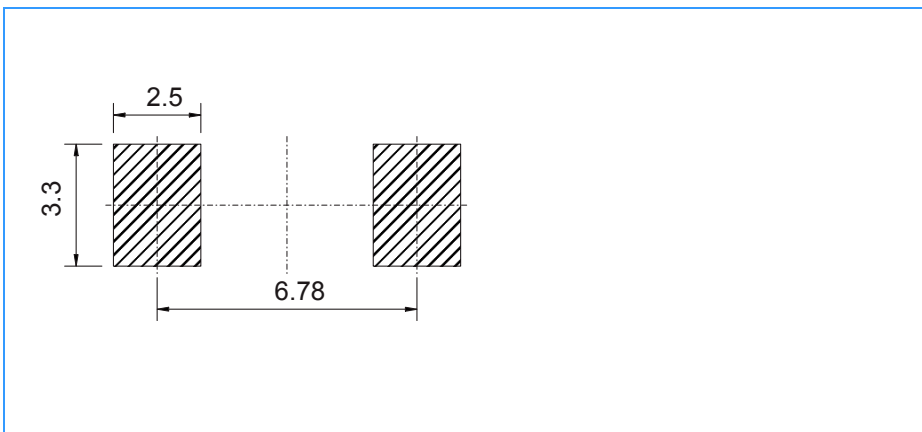
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## Package Outline Dimensions (unit: mm)



## Mounting Pad Layout (unit:mm)



## Ordering Information

Part Number	Marking	Package	Shipping Quantity
RS5ACF	RS5ACF	SMCF	3000 pcs / Tape & Reel
RS5BCF	RS5BCF	SMCF	3000 pcs / Tape & Reel
RS5DCF	RS5DCF	SMCF	3000 pcs / Tape & Reel
RS5GCF	RS5GCF	SMCF	3000 pcs / Tape & Reel