

# US5A THRU US5M

## Features

- High Surge Current Capability
- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/Rohs Compliant (Note 1) ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
US5A	US5A	50V	35V	50V
US5B	US5B	100V	70V	100V
US5D	US5D	200V	140V	200V
US5F	US5F	300V	210V	300V
US5G	US5G	400V	280V	400V
US5J	US5J	600V	420V	600V
US5K	US5K	800V	560V	800V
US5M	US5M	1000V	700V	1000V

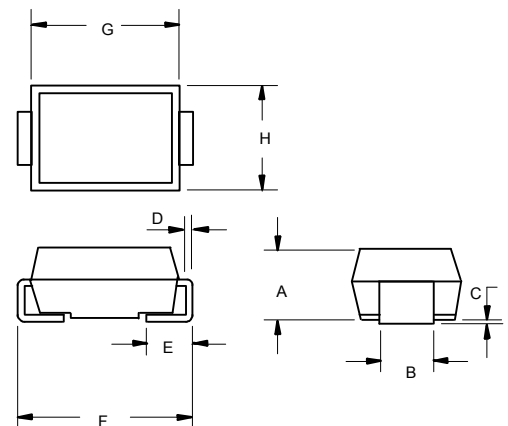
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	5.0A	$T_L = 75^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.0V 1.3V 1.7V	$I_F = 5.0\text{A};$ $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu\text{A}$ 250 $\mu\text{A}$	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	50ns 75ns	$I_F = 0.5\text{A}, I_R = 1.0\text{A},$ $I_{rr} = 0.25\text{A}$
Typical Thermal Resistance(Note 2)	$R_{thJA}$ $R_{thJL}$	47°C/W 13°C/W	

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a  
2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3"x0.3"(8.0mm x 8.0mm) copper pad areas.

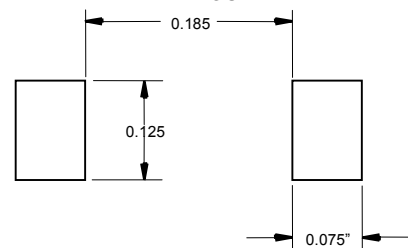
## 5 Amp Ultra Fast Rectifier 50 to 1000 Volts

## DO-214AB (SMC)(LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.103	2.00	2.62	
B	.108	.128	2.75	3.25	
C	.002	.008	0.051	0.203	
D	.006	.012	0.152	0.305	
E	.030	.080	0.76	1.52	
F	.305	.320	7.75	8.13	
G	.280	.280	6.60	7.11	
H	.220	.245	5.59	6.22	

### SUGGESTED SOLDER PAD LAYOUT



## Characteristics(Typical)

FIG.1: FORWARD CURRENT DERATING CURVE

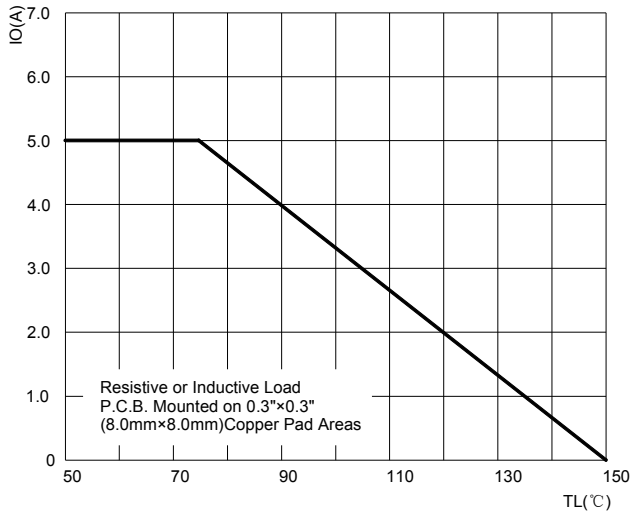


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

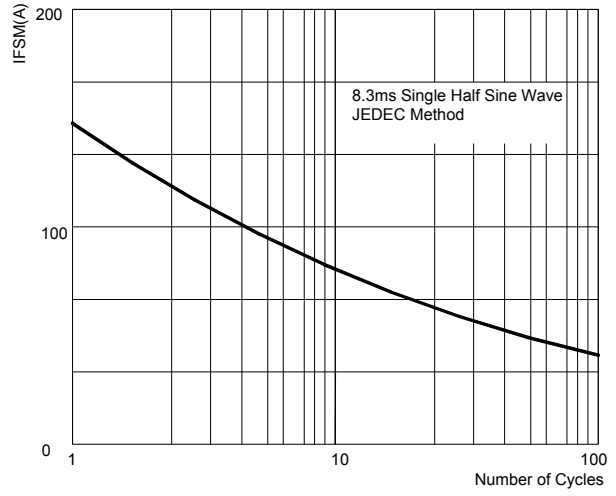


FIG.3: TYPICAL FORWARD CHARACTERISTICS

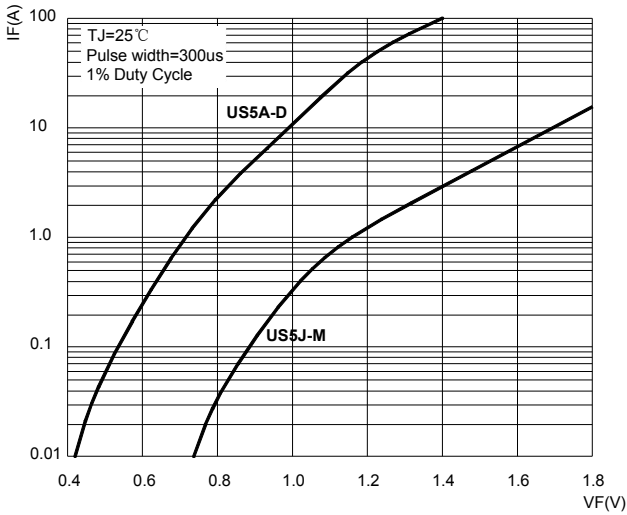


FIG.4: TYPICAL FORWARD CHARACTERISTICS

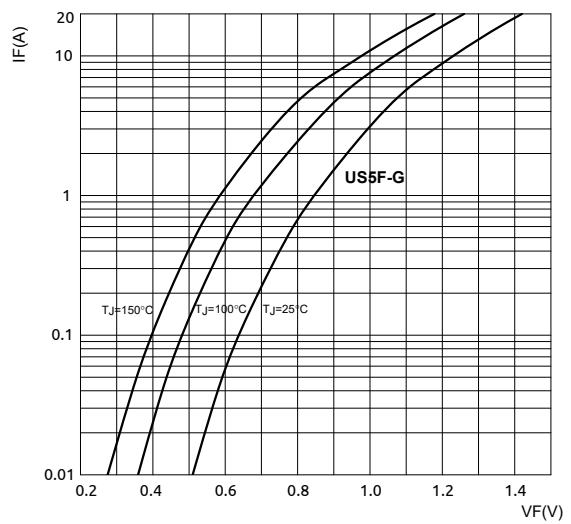


FIG.5: TYPICAL REVERSE CHARACTERISTICS

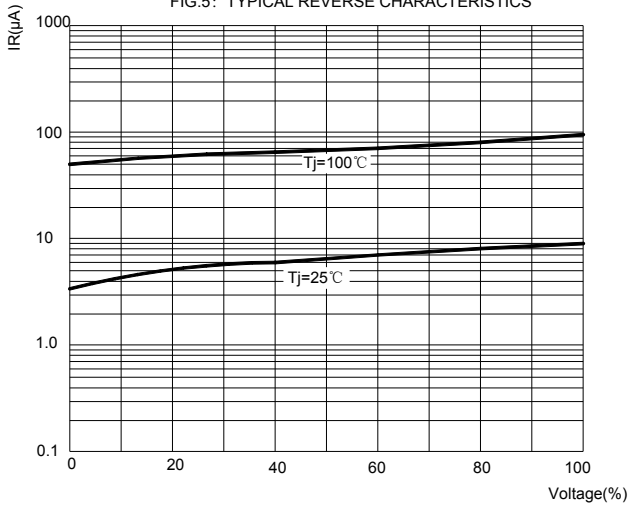
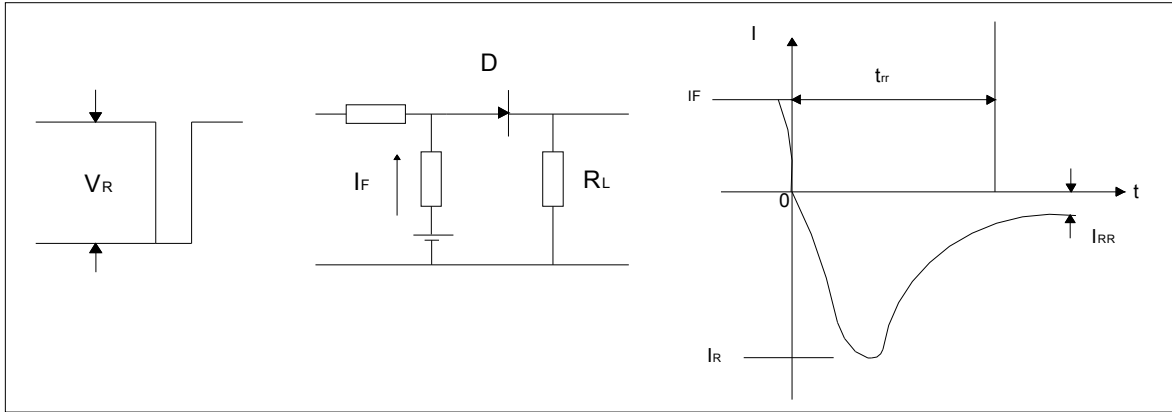


FIG.6: Diagram of circuit and Testing wave form of reverse recovery time





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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