

Features

- $I_{F(AV)}$ 5A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- US5X

X : From A To M



SMC top view



Schematic diagram



Pb-Free



Halogen-Free

Limiting Values(Absolute Maximum Rating)

Symbol	Parameter	Test Conditions	US5							Unit
			A	B	D	G	J	K	M	
V_{RRM}	Repetitive Peak Reverse Voltage		50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS voltage		35	70	140	280	420	560	700	V
$I_{F(AV)}$	Average Forward Current	60Hz Half-sine wave Resistance load	5.0							A
I_{FSM}	Surge(Non-repetitive)Forward Current	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	150							A
T_J, T_{stg}	Storage Temperature Range		-55~+150							$^{\circ}C$

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Test Condition	US5							Unit
			A	B	D	G	J	K	M	
Peak Forward Voltage	V _F	I _F =5.0A	1.0			1.3	1.7		V	
Maximum reverse recovery time	t _{rr}	I _F =5.0A,I _R =0.1A,I _{rr} =0.25A	50				75		ns	
Peak Reverse Current	I _{RRM1}	V _{RM} =V _{RRM} T _a =25℃	5							μA
	I _{RRM2}	V _{RM} =V _{RRM} T _a =125℃	150							
Thermal Resistance(Typical)	R _{θJ-A}	Between junction and ambient	95							℃/W
	R _{θJ-L}	Between junction and terminal	4							
Juction Capacitance (Typical)	Cj	Measured at 1MHZ and Applied Rever Voltage of 4.0 V.D.C	78			42	30	45	pF	

Thermal resistance from junction to ambient and from junction to lead mounted on 1" x 1"(25.4mm x 25.4mm) F

R4 PCB, double sided copper, with minimum pad layout

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

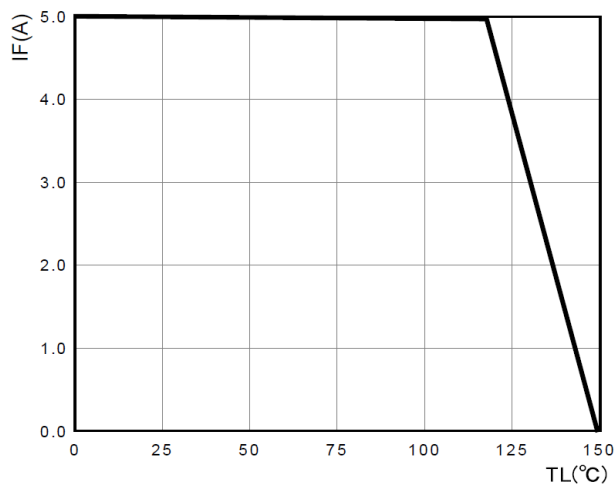
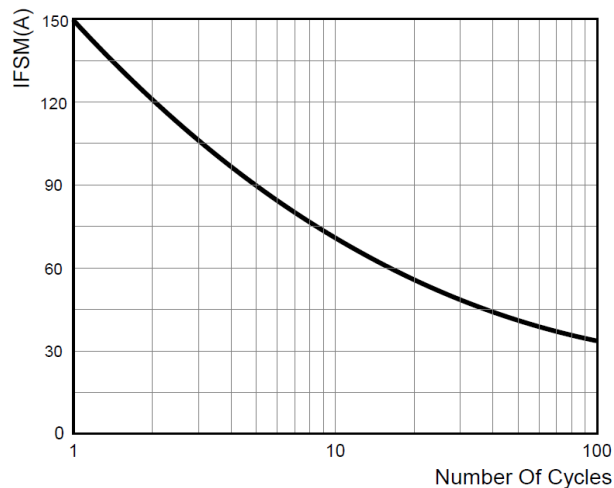
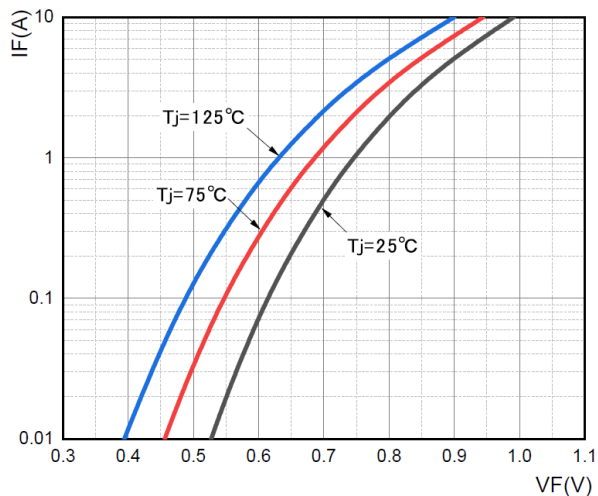


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



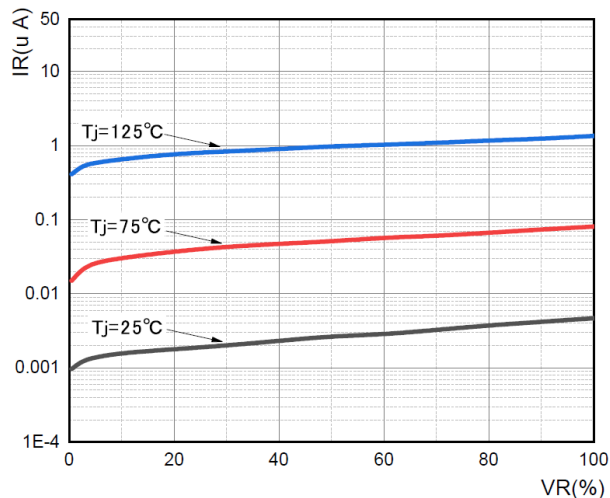
US5A-US5D

FIG.3 : TYPICAL FORWARD CHARACTERISTICS



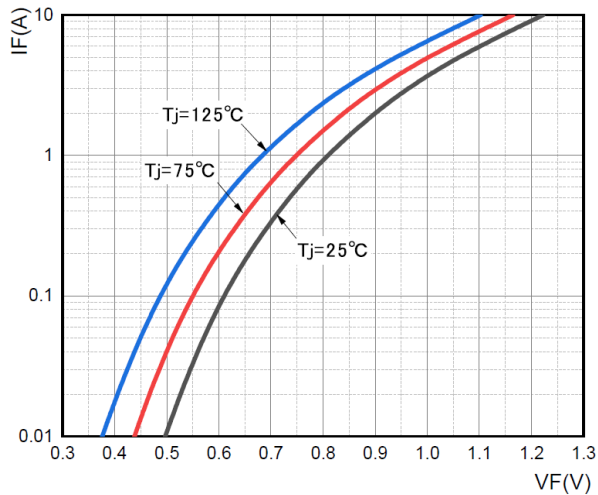
US5A-US5D

FIG.4: TYPICAL REVERSE CHARACTERISTICS



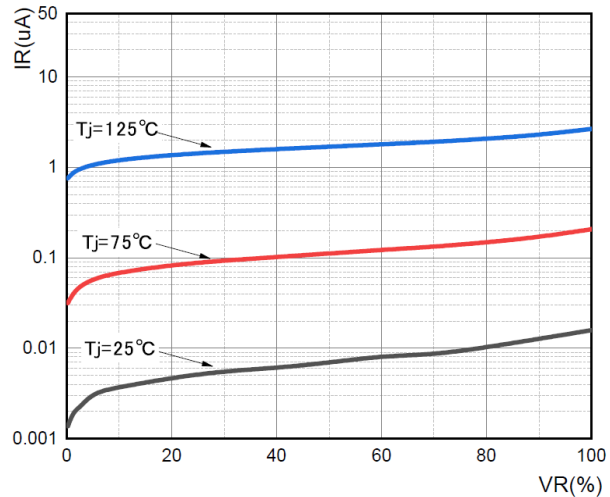
US5G

FIG.5 : TYPICAL FORWARD CHARACTERISTICS



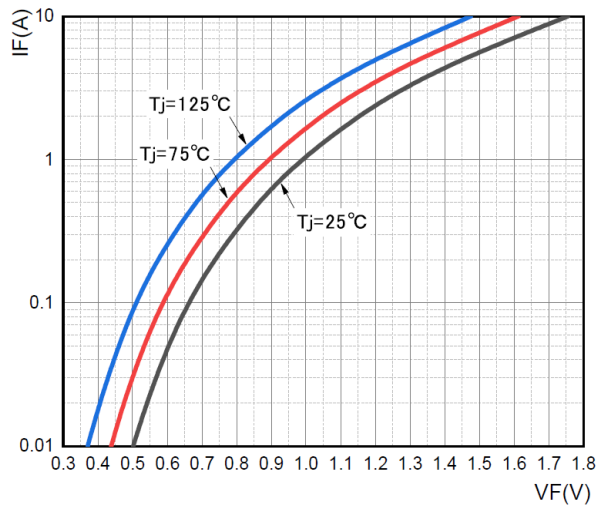
US5G

FIG.6: TYPICAL REVERSE CHARACTERISTICS



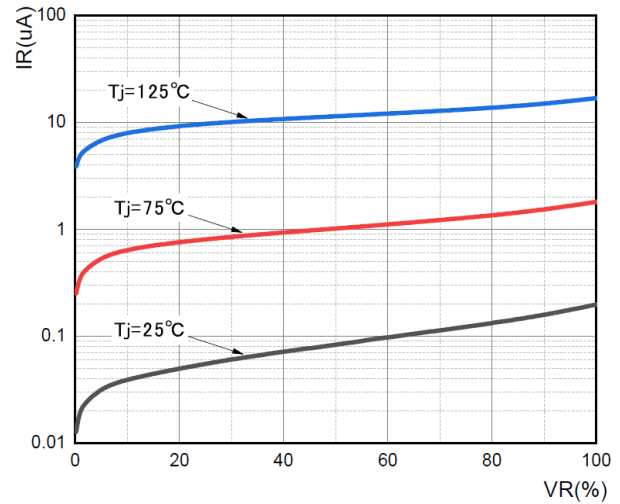
US5J

FIG.7 : TYPICAL FORWARD CHARACTERISTICS



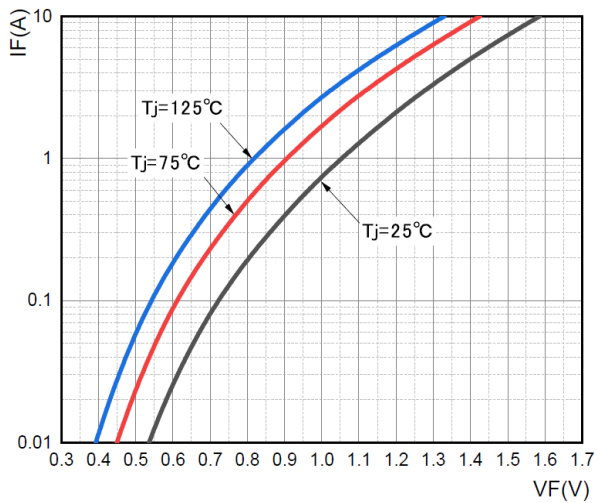
US5J

FIG.8: TYPICAL REVERSE CHARACTERISTICS



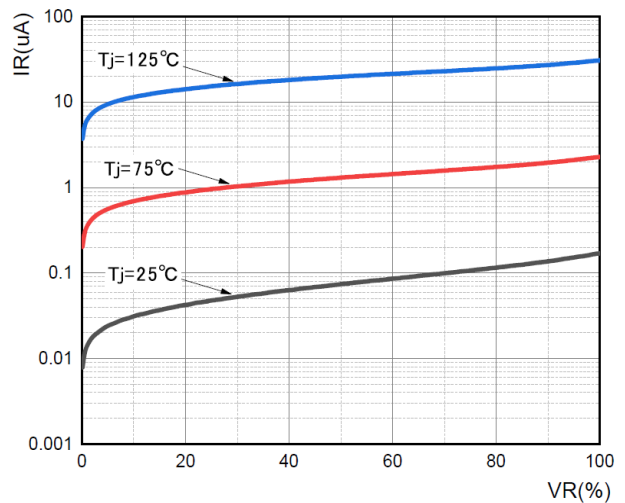
US5K-US5M

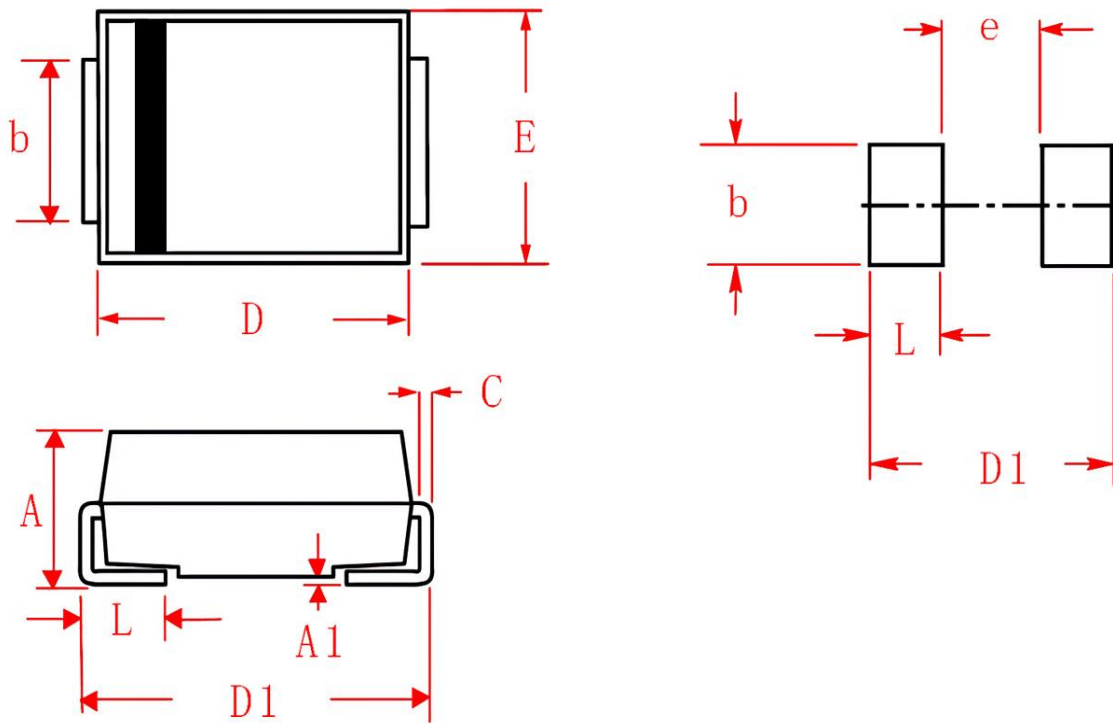
FIG.9 : TYPICAL FORWARD CHARACTERISTICS



US5K-US5M

FIG.10: TYPICAL REVERSE CHARACTERISTICS



SMC Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	2.000	2.620	0.079	0.103
A1	0.050	0.210	0.002	0.008
b	2.750	3.250	0.108	0.128
C	0.150	0.310	0.006	0.012
D	6.500	7.000	0.256	0.275
D1	7.600	8.000	0.299	0.315
E	5.600	6.200	0.220	0.244
e	-	4.690	-	0.185
L	0.900	1.600	0.035	0.063