

Features

- $I_{F(AV)}$ 3A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- US3X

X : From A To M



SMC top view



Schematic diagram



Halogen-Free

Limiting Values(Absolute Maximum Rating)

Symbol	Parameter	Test Conditions	US3							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, $T_L=110^{\circ}C$	3.0							A
I_{FSM}	Surge(Non-repetitive)Forward Current	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	100							A
T_J, T_{stg}	Storage Temperature Range		-55~+150							$^{\circ}C$

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

Item	Symbol	Condition	US3							Unit
			A	B	D	G	J	K	M	
Peak Forward Voltage	V _F	I _F =3.0A	1.0			1.3	1.7		V	
Maximum reverse recovery time	t _{rr}	I _F =0.5A, I _R =1.0A, 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							
Juction Capacitance (Typical)	C _j	Measured at 1MHZ and Applied 60 Reverse Voltage of 4.0 V.D.C	60			30	23		pF	
Thermal Resistance(Typical)	R _{θJ-A}	Between junction and ambient	102							℃/W
	R _{θJ-L}	Between junction and terminal	4							

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas .

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

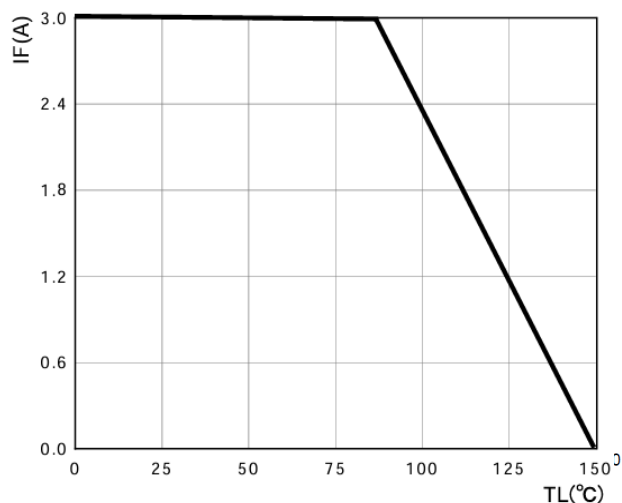
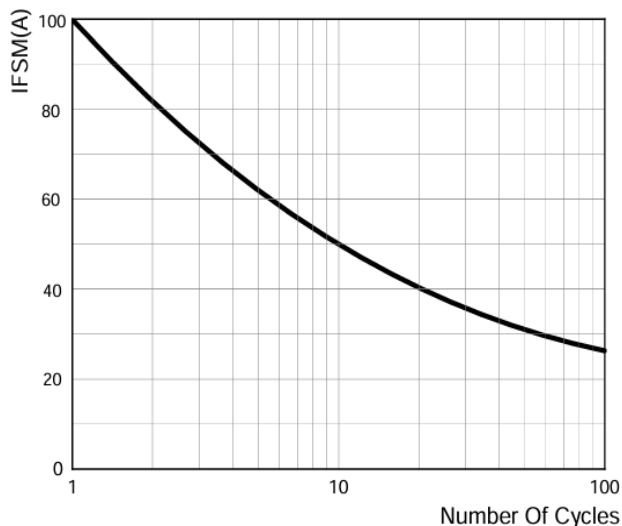


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



US3A-US3D

US3A-US3D

FIG.3 : TYPICAL FORWARD CHARACTERISTICS

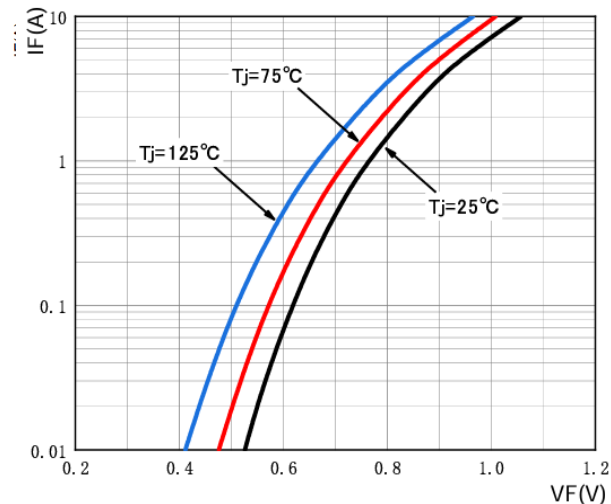
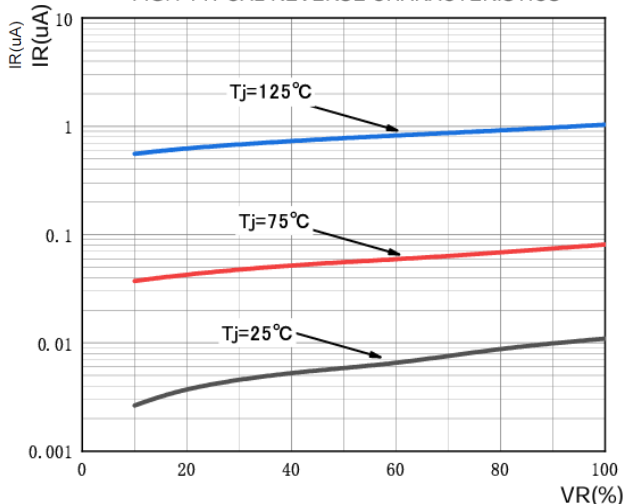


FIG.4 TYPICAL REVERSE CHARACTERISTICS



US3G

US3G

FIG.5 : TYPICAL FORWARD CHARACTERISTICS

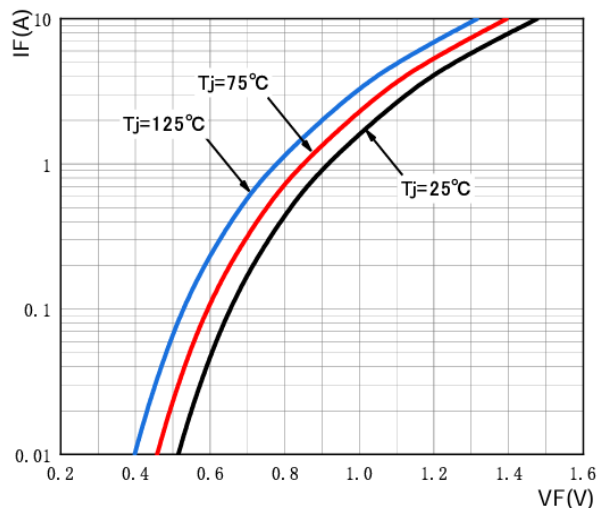
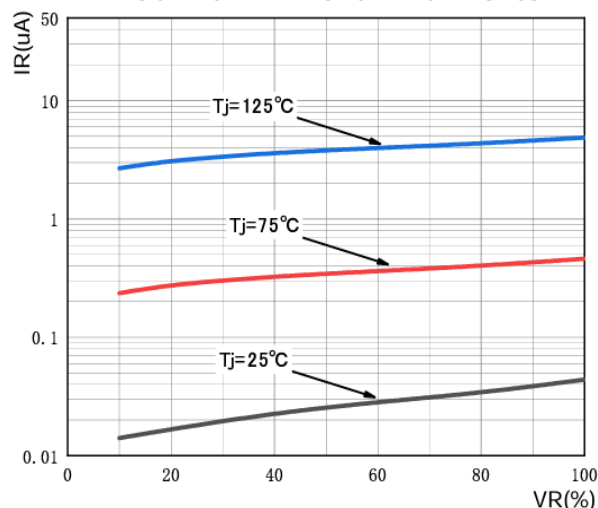
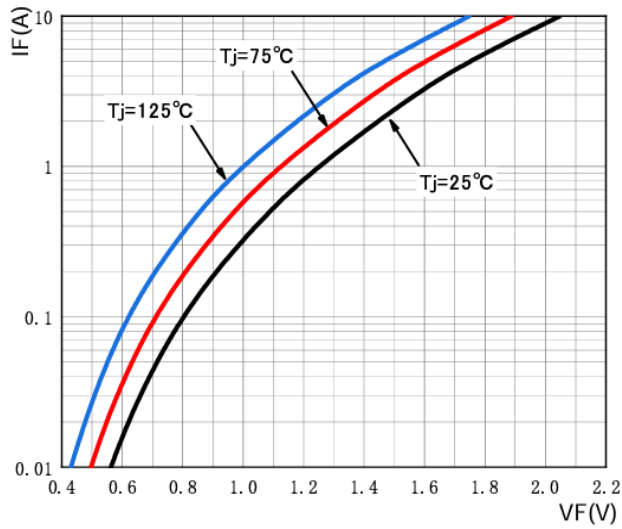


FIG.6 TYPICAL REVERSE CHARACTERISTICS



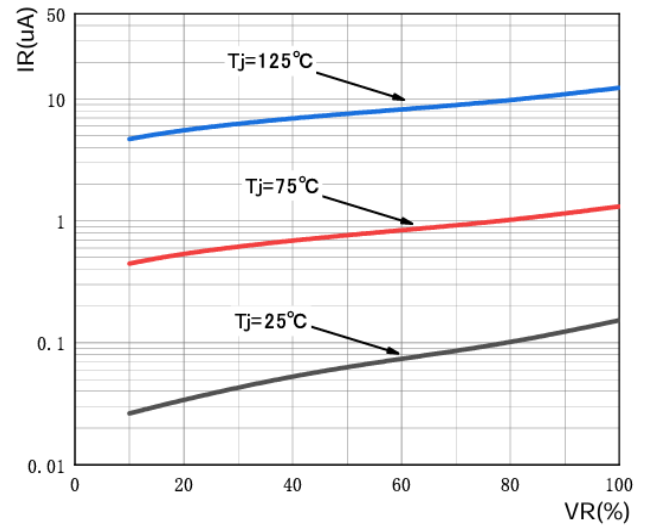
US3J-US3M

FIG.7 : TYPICAL FORWARD CHARACTERISTICS

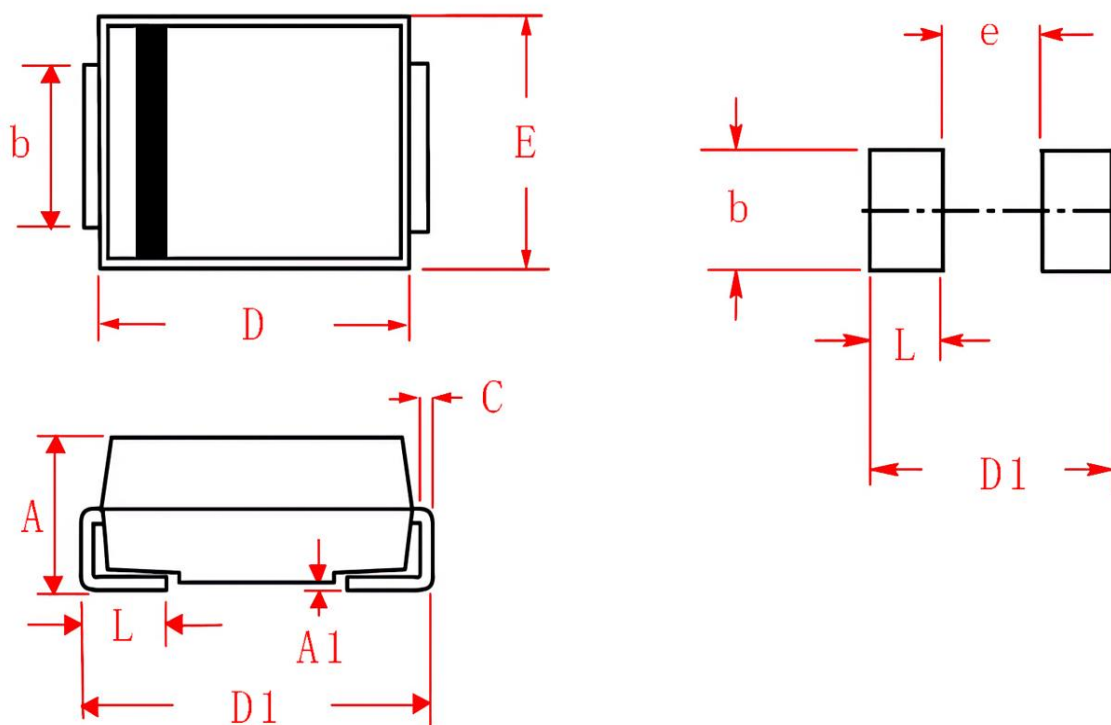


US3J-US3M

FIG.8 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