


### FEATURES

- Glass passivated junction
- For Surface Mount Applications, Easy to pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low forward voltage drop
- High current capability, High reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, Low leakage
- High temperature soldering guaranteed:260°C/10 seconds at terminals,
- Component in accordance to RoHS 2015/863/EU



### SMC(DO-214AB)



Cathode  Anode

### MECHANICAL DATA

- Case: JEDEC SMC(DO-214AB) molded plastic body
- Terminals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Weight: 0.007ounce,0.21 gram

### TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,60HZ,resistive or inductive load. For capacitive load,derate current by 20%.)

Parameters	Symbols	US3AC	US3BC	US3DC	US3FC	US3GC	US3JC	US3KC	US3MC	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RM}$	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100								A
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.0				1.3	1.7			V
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^{\circ}C$	5.0								$\mu A$
	$T_A=125^{\circ}C$	100								
Maximum reverse recovery time(Note1)	$t_{rr}$	50					75			ns
Typical junction capacitance(Note2)	$C_j$						25			pF
Typical Thermal Resistance(Note3)	$R_{\theta JA}$						47			$^{\circ}C/W$
	$R_{\theta JL}$						12			
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to+150								$^{\circ}C$

Note: 1.Test conditions:  $I_L=0.5A, I_R=1.0A, I_{RM}=0.25A$ .

2.Measured at 1MHZ and applied reverse voltage of 4.0 Volts.

3.Units mounted on PCB with 0.31" x 0.31" (8.0 mm x 8.0 mm) copper pad areas

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

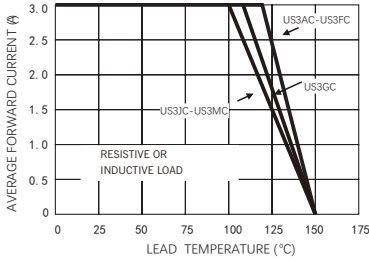


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

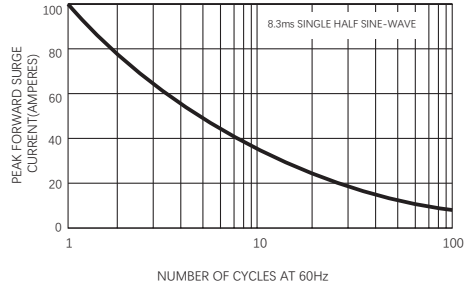


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

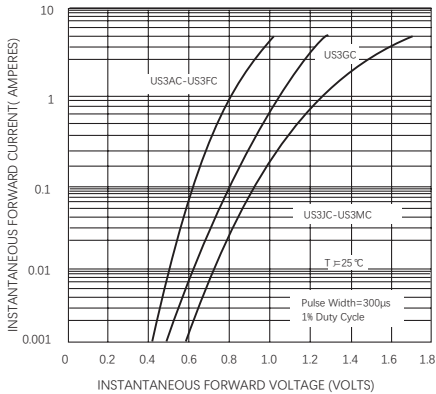


FIG.4-TYPICAL REVERSE CHARACTERISTICS

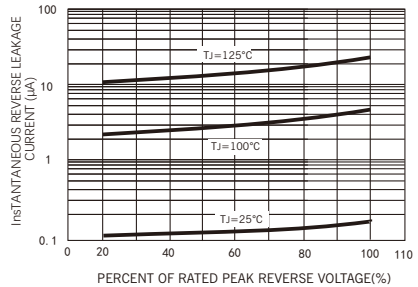


FIG.5-TYPICAL JUNCTION CAPACITANCE

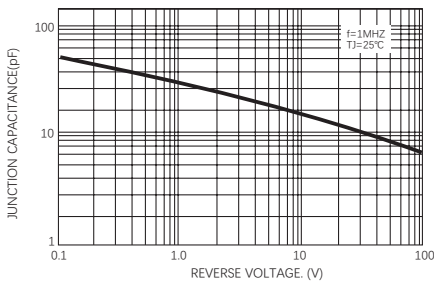
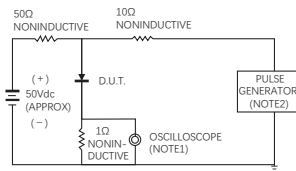
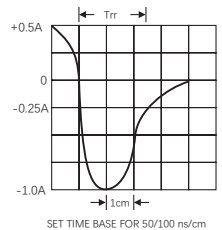


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1. Rise Time=7ns max. input impedance=1 megohm 22pF  
2. Rise Time=10ns max. source impedance=50 ohms

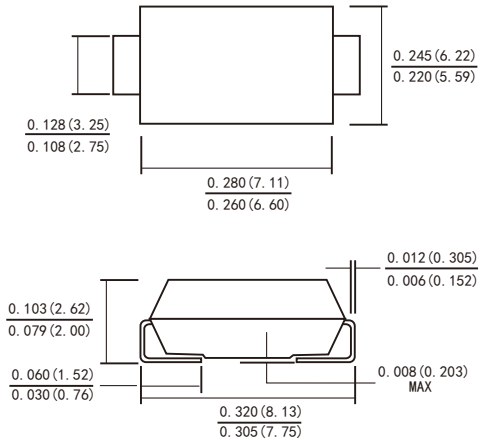


## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)	Quantity (carton) (K)
US3AC...US3MC-SMC	T/R	Φ330	3000	338×338×39	2	370×370×360	8	48

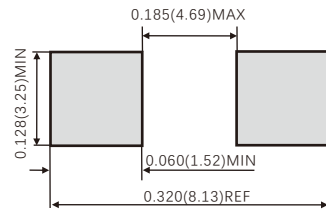
## PACKAGE OUTLINE DIMENSIONS

### SMC(DO-214AB)



Dimensions in inches and (millimeters)

### Suggested PAD Layout



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