

■ Features

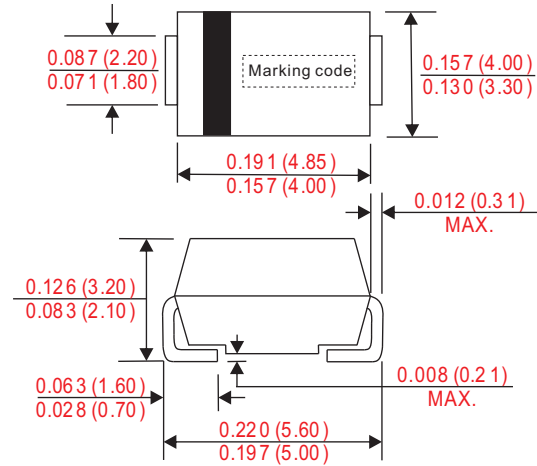
- Low profile surface mounted application in order to optimize board space.
- High current capability.
- High surge capability.
- Ultrafast recovery time for high efficiency.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. US1ABG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AA / SMB
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.003 ounce, 0.091 gram

■ Outline

SMB(DO-214AA)



Dimensions in inches and (millimeters)

■ 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%.

Parameter			Conditions		Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current					I _O			1.0	A
Forward surge current			8.3ms single half sine-wave superimposed on rate load (JEDEC method)		I _{FSM}			30	A
Reverse current			V _R = V _{RRM} T _A = 25°C		I _R			5.0	uA
			V _R = V _{RRM} T _A = 125°C					100	
Storage temperature					T _{STG}	-55		+150	°C
Symbol	Marking code	Max. repetitive peak reverse voltage V _{RRM} (V)	Max. RMS voltage V _{RMS} (V)	Max. DC blocking voltage V _R (V)	Max. forward voltage @1A, T _A = 25°C V _F (V)	Max. reverse recovery time(1) T _{rr} (ns)		Operating temperature T _j (°C)	
US1AB	US1A	50	35	50	1.0	50		-55 ~ +150	
US1BB	US1B	100	70	100					
US1DB	US1D	200	140	200					
US1GB	US1G	400	280	400	1.40	75			
US1JB	US1J	600	420	600	1.70				
US1KB	US1K	800	560	800					
US1MB	US1M	1000	700	1000					

Note : 1. $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

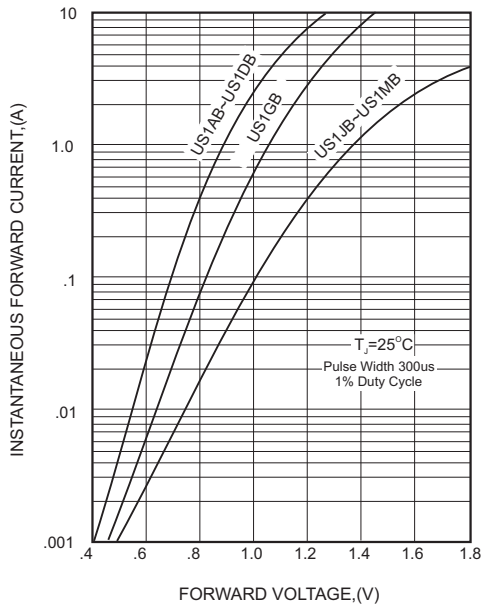


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

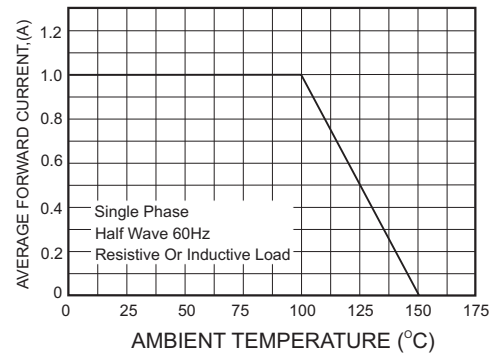


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

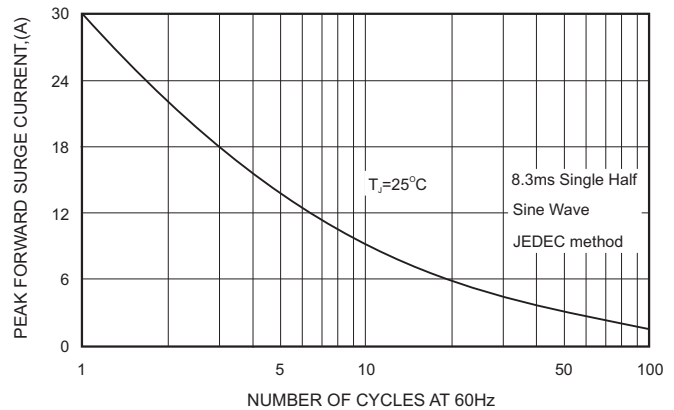
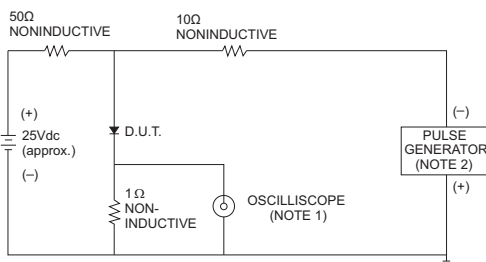


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

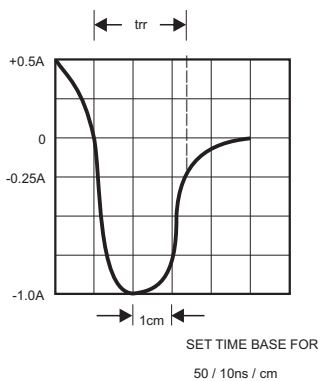
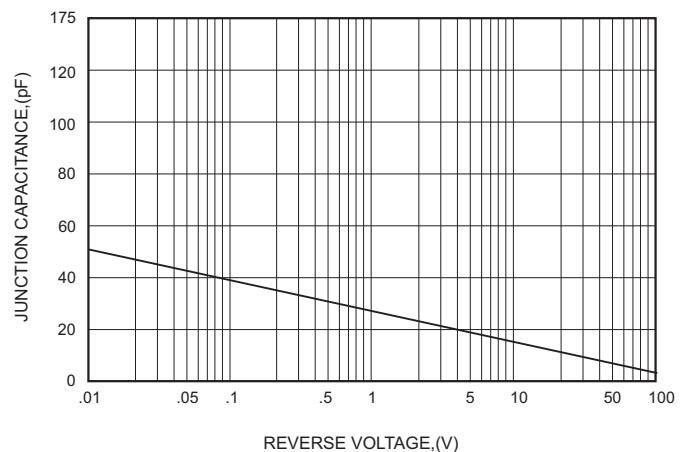
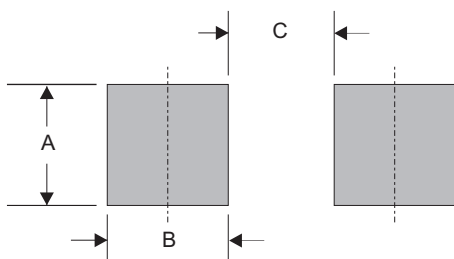


FIG.5-TYPICAL JUNCTION CAPACITANCE



■ SMB foot print



A	B	C
0.091 (2.30)	0.098 (2.50)	0.071 (1.80)

Dimensions in inches and (millimeters)

- CITC reserves the right to make changes to this document and its products and specifications at any time without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- CITC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CITC assume any liability for application assistance or customer product design.
- CITC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of CITC.
- CITC products are not authorized for use as critical components in life support devices or systems without express written approval of CITC.