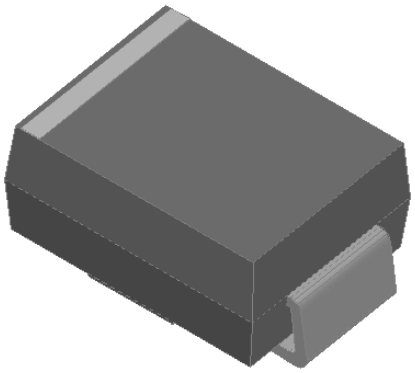
Surface Mount General Purpose Rectifier

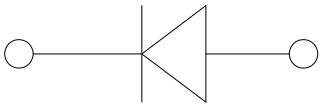


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.



Mechanical Data

- **Package**: DO-214AA (SMB)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	GS5AB	GS5BB	GS5DB	GS5GB	GS5JB	GS5KB	GS5MB
Device marking code			GS5AB	GS5BB	GS5DB	GS5GB	GS5JB	GS5KB	GS5MB
Maximum Repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	A	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	150						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			300						
Current squared time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	94						
Storage temperature	Tstg	℃	-55 ~ +150						
Junction temperature	T_j	℃	-55 ~ +150						

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GS5AB	GS5BB	GS5DB	GS5GB	GS5JB	GS5KB	GS5MB
Maximum instantaneous forward voltage	VF	V	IFM=5.0A	1.1						
Maximum DC reverse current at rated DC blocking voltage	IR	μA	T_j=25℃	5						
			T_j=125℃	100						
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	34						

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	GS5AB	GS5BB	GS5DB	GS5GB	GS5JB	GS5KB	GS5MB
Typical Thermal resistance	RθJ-A	℃/W	80[1]						
	RθJ-L		35[1]						
	RθJ-C		30[1]						

Note:
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

FIG1：Io-TL Curve

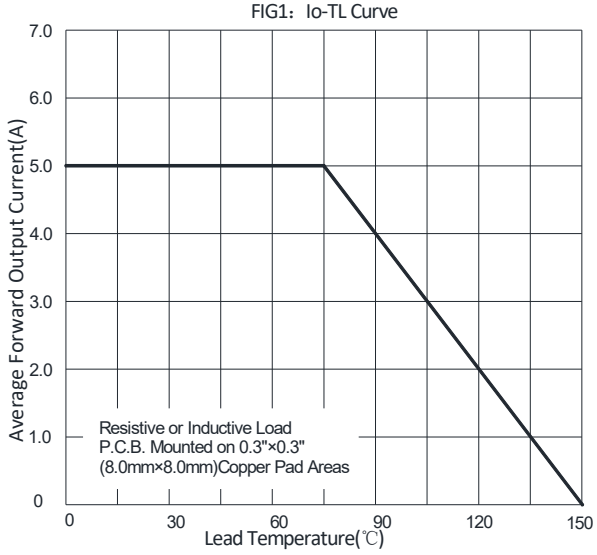


FIG2：Surge Forward Current Capability

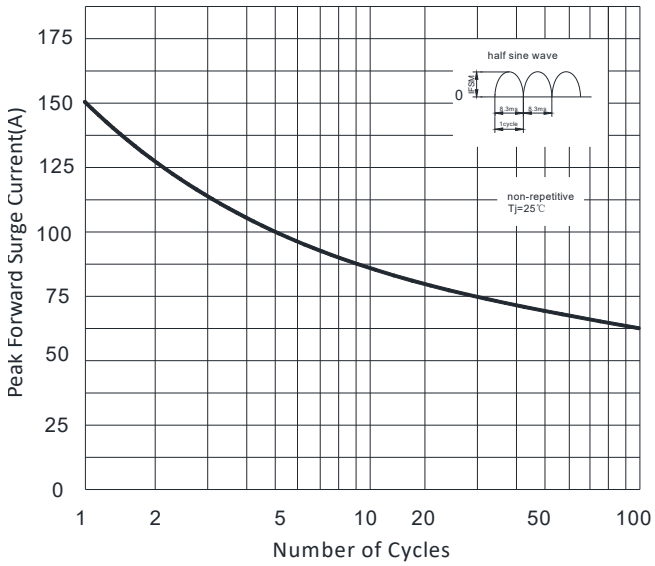


FIG3：Typical Forward Voltage

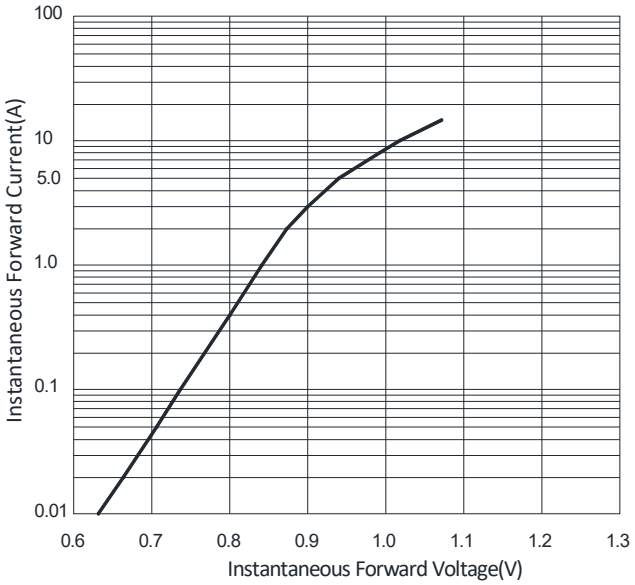


FIG4:Typical Reverse Characteristics

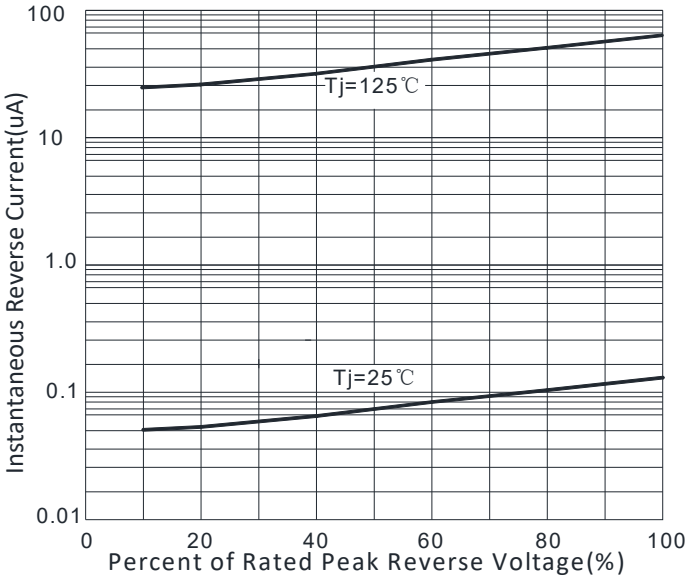
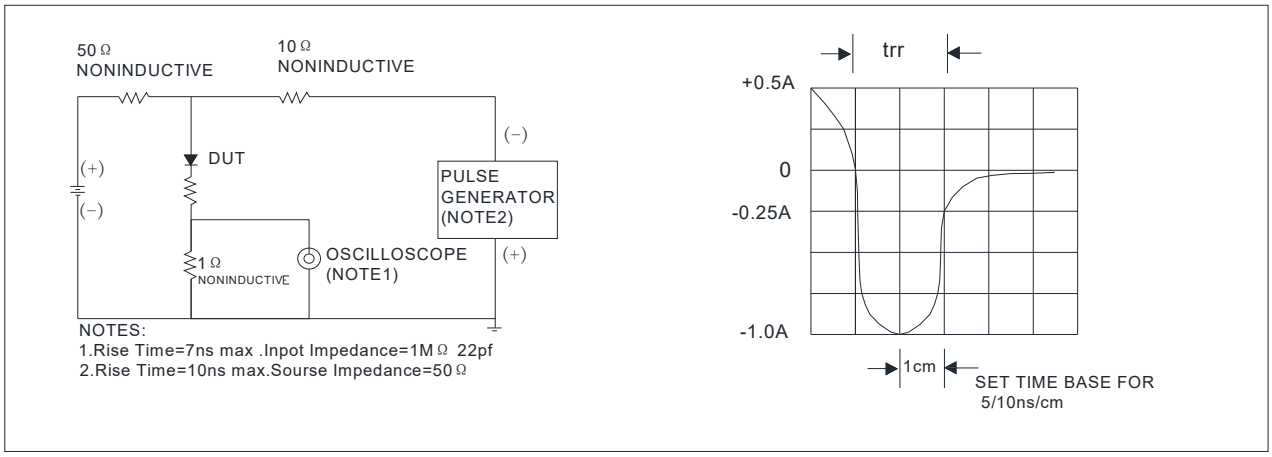


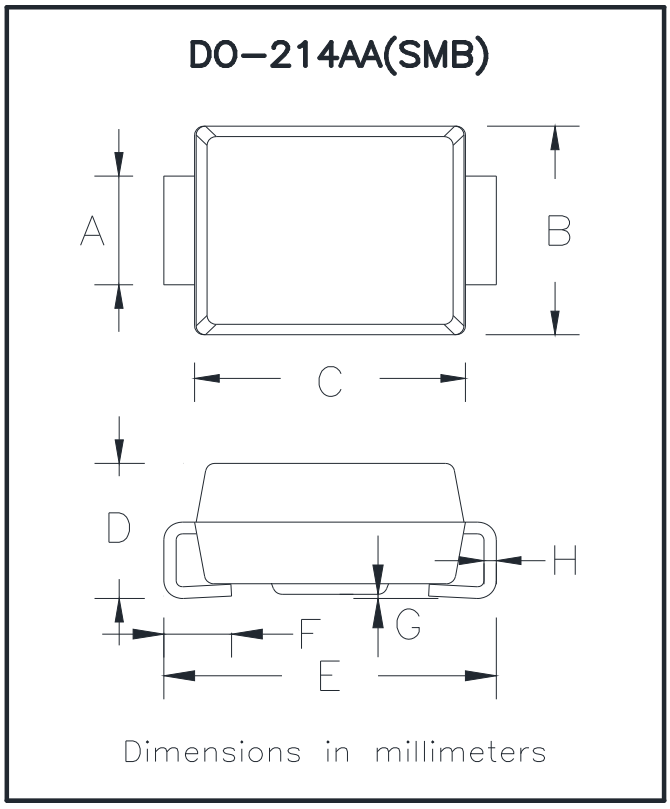
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

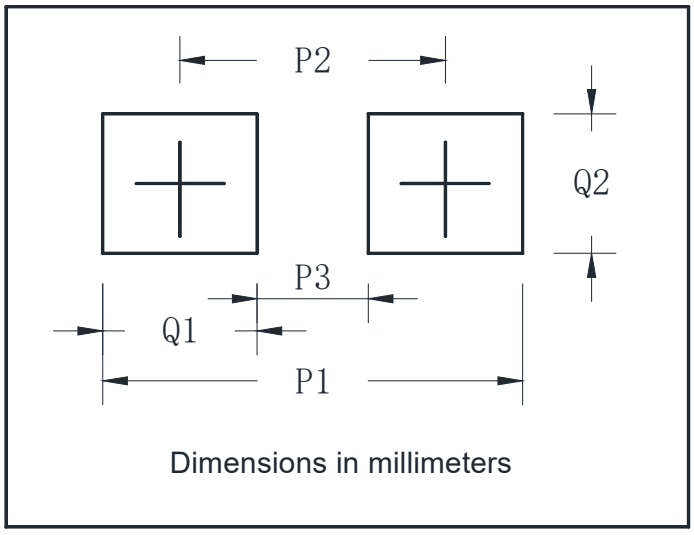
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GS5AB-GS5MB	F1	Approximate 0.096	3000	/	48000	13” reel
GS5AB-GS5MB	F2	Approximate 0.096	750	6000	24000	7” reel
GS5AB-GS5MB	F3	Approximate 0.096	500	4000	16000	7” reel

■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.05	0.20
H	0.15	0.31

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3

Disclaimer

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.
Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.