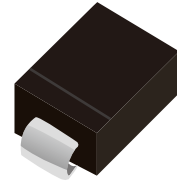


FEATURES

- | Ideal For Automated Placement
- | Glass Passivated Chip Junction
- | High Forward Surge Capability
- | Fast Reverse Recovery Time



DO-214AA(SMB)



Schematic Symbol

MECHANICAL DATA

- | Case Material: Molded Plastic. UL Flammability Classification
- | Rating 94V-0

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter		Symbol	RS3AB	RS3BB	RS3DB	RS3GB	RS3JB	RS3KB	RS3MB	Unit
Marking			RS3AB	RS3BB	RS3DB	RS3GB	RS3JB	RS3KB	RS3MB	
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	35	70	140	280	420	560	700	
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)		I _O	3.0							A
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25°C		I _{FSM}	100							A
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			200							
Maximum instantaneous forward voltage I _{FM} =3.0A		V _F	1.3							V
Maximum DC reverse current at rated DC blocking voltag	T _J =25°C	I _R	5.0							μA
	T _J =125°C		100							
Current squared time @1ms≤t≤8.3ms Tj=25°C		I ² t	41.5							A ² s
Maximum reverse recovery time I _F =0.5A,I _R =1.0A, I _{rr} =0.25A		T _{rr}	150				250	500		ns
Typical junction capacitance Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C		C _J	40				30			pF
Typical Thermal Resistance		R _{θJA(1)}	60							°C/W
		R _{θJL(1)}	20							°C/W
		R _{θJC(1)}	18							°C/W
Operating junction and storage temperature range		T _J ,T _{STG}	-55 to +150							°C

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

CHARACTERISTIC CURVES

FIG.1: Io-TL Curve

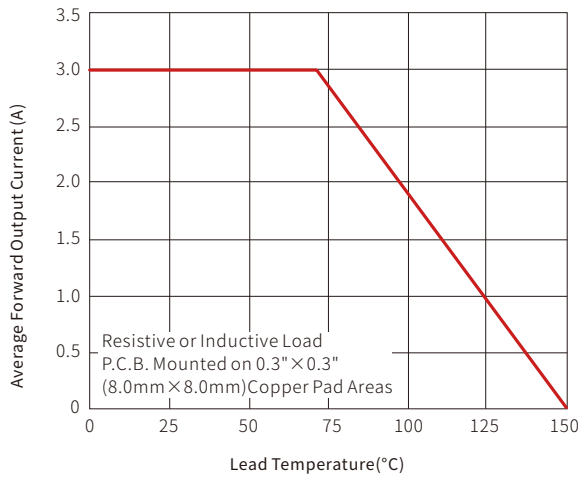


FIG.2: Forward Surge Current Capability

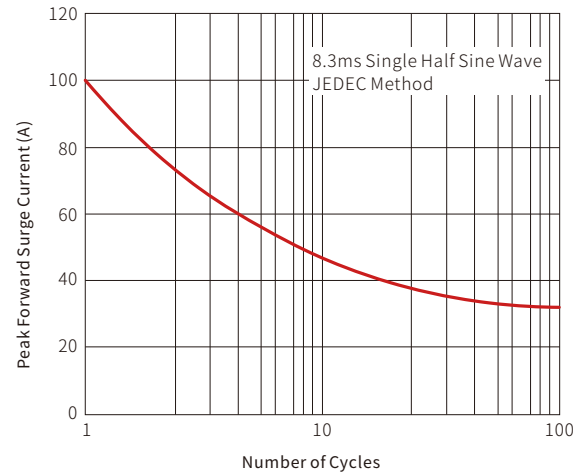


FIG.3: Typical Forward Voltage

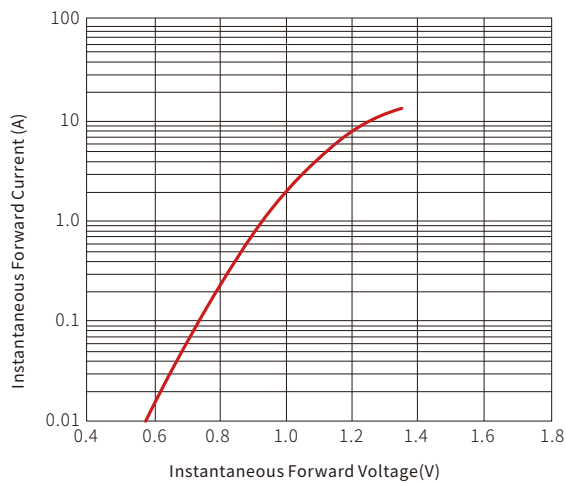


FIG.4: Typical Reverse Characteristics

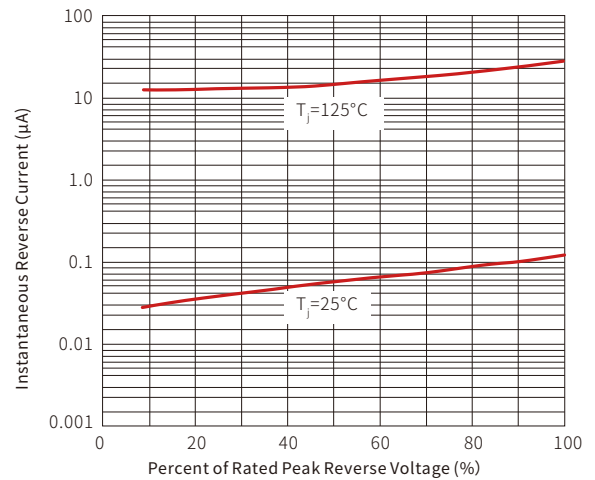
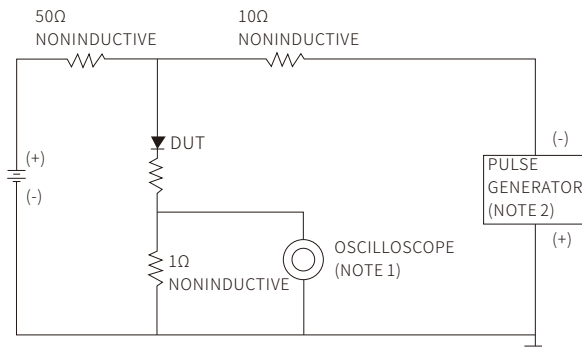
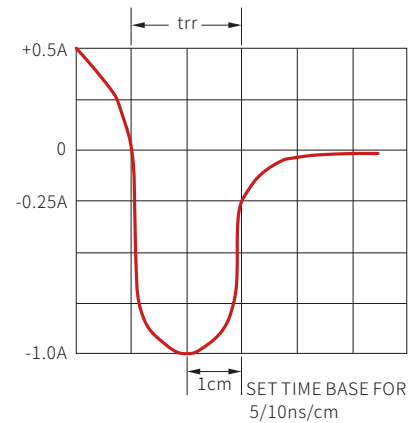


Fig. 5-Diagram of circuit and Testing wave form of reverse recovery time

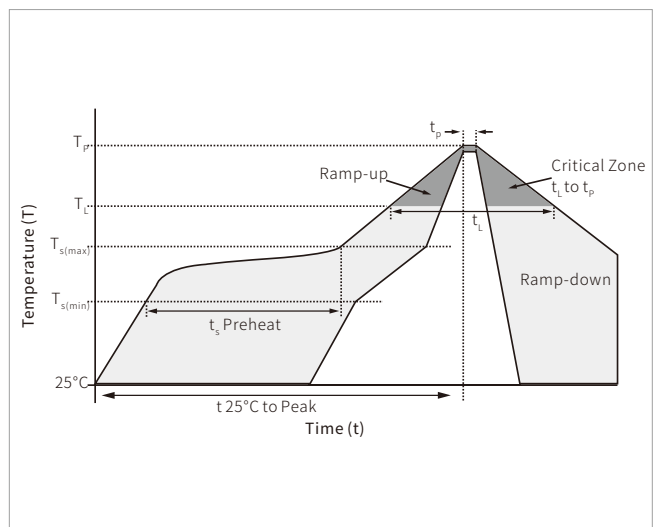


Notes: 1. Rise Time=7ns max. Input Impedance=1MΩ 22pf
 2. Rise Time=10ns max. Source Impedance=50Ω

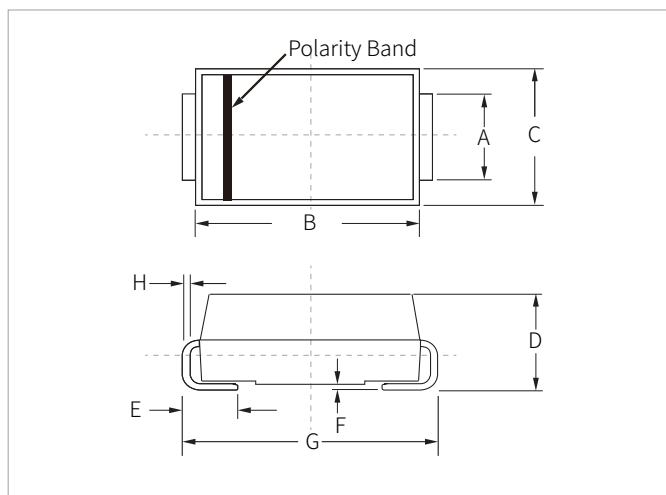


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

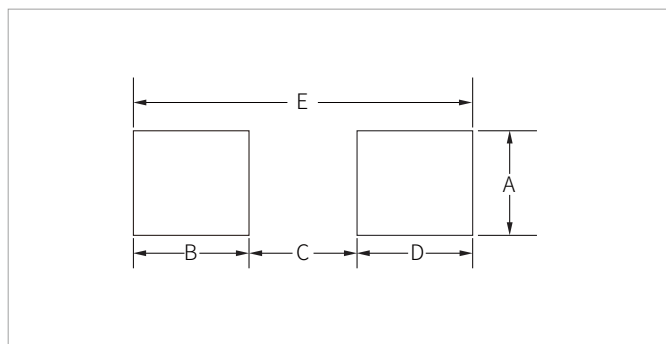


DO-214AA(SMB) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.80	2.20	0.071	0.087
B	4.30	4.70	0.170	0.185
C	3.40	3.90	0.134	0.153
D	2.15	2.75	0.085	0.108
E	1.00	1.50	0.039	0.059
F	0.02	0.20	0.001	0.008
G	5.10	5.50	0.200	0.216
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	-	0.087	-
B	1.45	-	0.057	-
C	-	2.55	-	0.010
D	1.45	-	0.057	-
E	5.60REF		0.220REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
RS3AB-RS3MB	DO-214AA(SMB)	3000PCS	13"

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