

SuperDiode – 2A, 50~600V Surface Mount Super Fast Rectifier



1. Features

- Flammability Classification 94V-0
- Built-in strain relief
- Fast Recovery times for high efficiency
- Low profile package
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals

2. Mechanical Data

- Case: Molded plastic, SMB and DO-214AA
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

3. Marking and Circuit

Marking	Circuit
	

4. Specification

Absolute Maximum Rating & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

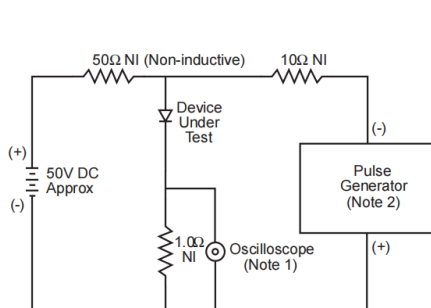
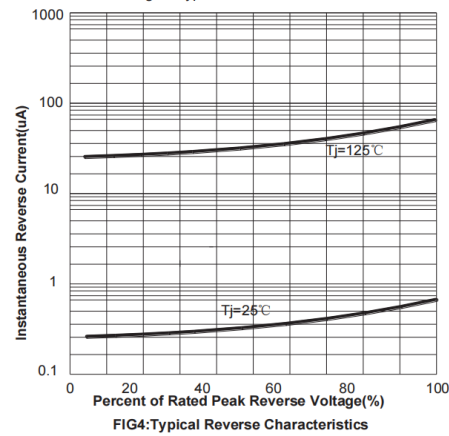
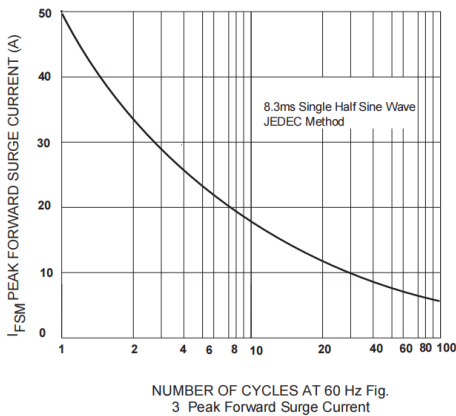
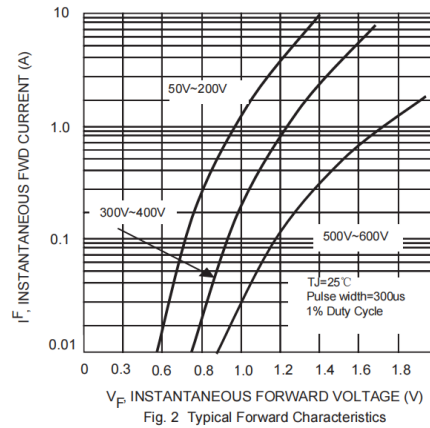
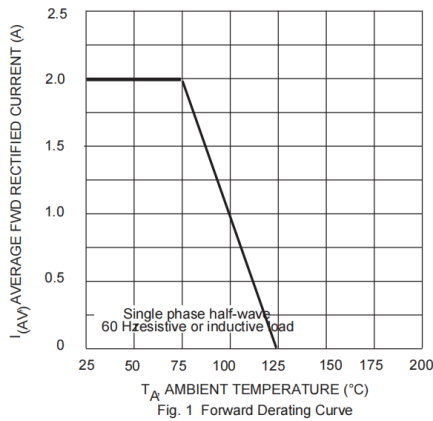
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameters	Symbol	ES2A	ES2B	ES2D	ES2G	ES2J	Unit	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V	
Maximum average forward rectified current. (Fig1)	$I_{(AV)}$	2.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50						A
Maximum instantaneous forward voltage at 1.0A DC	V_F	1.0			1.3	1.7	V	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_j=25\text{ }^\circ\text{C}$					5.0	uA
		$T_j=100\text{ }^\circ\text{C}$						
Maximum reverse recovery time (NOTE 1)	T_{RR}	35					ns	
Typical junction capacitance (NOTE 2)	C_J	15.0					pF	
Typical thermal resistance	$R_{\theta JL}$	20					°C/W	
Operating junction temperature range	T_J	-55~150					°C	
Storage temperature range	T_{STG}	-55~150					°C	

Note:

1. Measured with $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Unit mounted on 16 mm*16 mm*1.6 mm 1oz/ft2 glass epoxy PCB board, pad per pin with 2*2mm solder pad areas
4. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.

5. Typical Characteristic



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

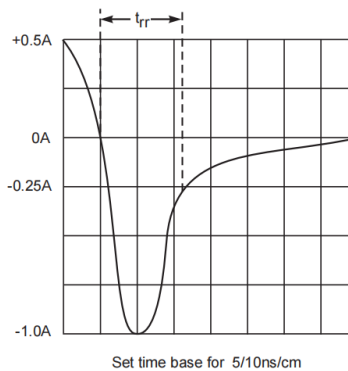
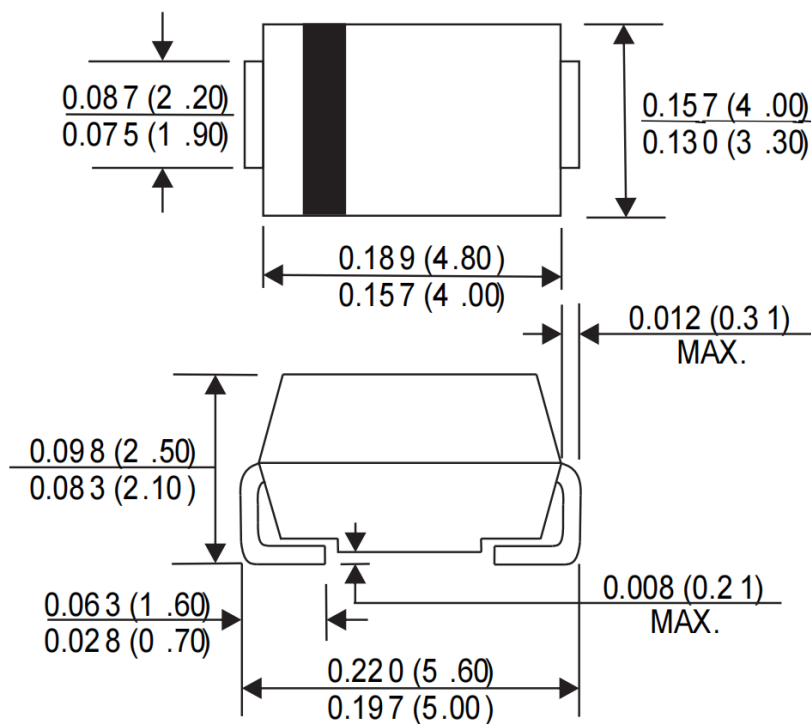


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

6. Dimension

SMB(DO-214AA)



Dimensions in inches and (millimeters)

7. Ordering Information

Preferred P/N	Package code	Unit weight(g)	Minimum Package(pcs)	Inner box Quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
SMB DO-214AA	F1	about 0.096	3000	6000	48000	13' reel

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