



#### SURFACE MOUNT SUPERFAST RECTIFIER

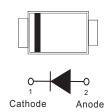
VOLTAGE 50 to 600 Volt CURRENT 2 Ampere

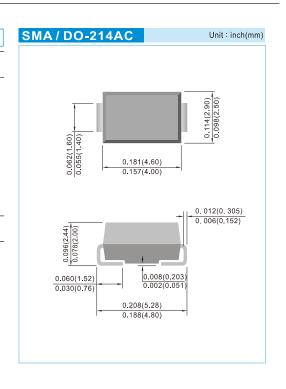
#### **FEATURES**

- For surface mounted applications in order to optimize board space
- · Easy pick and place
- · Superfast recovery times for high efficiency.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- · Glass passivated junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### **MECHANICAL DATA**

- · Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- · Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- · Weight: 0.0023 ounces, 0.0679 grams





#### **MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

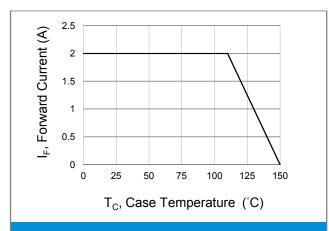
PARAMETER	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	>
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	2						Α	
Peak Forward Surge Current : 8.3ms single half sine-wav superimposed on rated load	e I <sub>FSM</sub>	50					А		
Maximum Forward Voltage at 2A	V <sub>F</sub>	0.95 1.25 1			1.7	>			
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>				1			•	μА
Maximum Reverse Recovery Time (Note 3)	t <sub>rr</sub>	35						ns	
Typical Junction Capacitance Measured at 1MHz and applied V <sub>R</sub> =4V	C J	25					pF		
Typica Thermal Resistance (Note 2) (Note 1)	$R_{_{ heta JC}}$	150 30						°C / W	
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to +150							°C

#### NOTES:

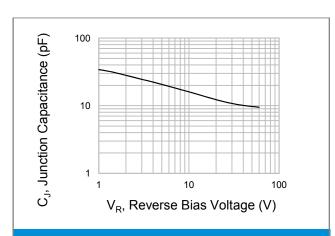
- 1. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.
- 2. Mounted on a FR4 PCB, single-sided copper, mini pad.
- 3.Reverse Recovery Test Conditions:  $I_F$ =0.5A ,  $I_R$ =1A Irr=0.25A.







**Fig.1 Forward Current Derating Curve** 



**Fig.2 Typical Junction Capacitance** 

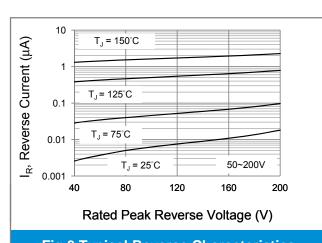


Fig.3 Typical Reverse Characteristics

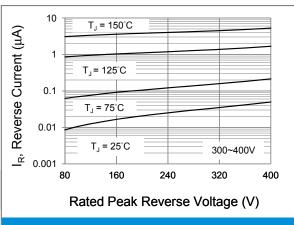
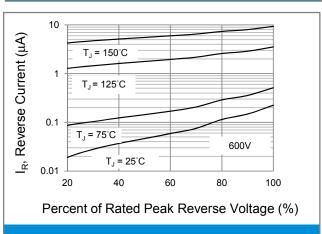
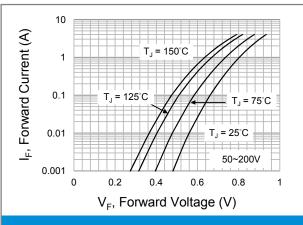


Fig.4 Typical Reverse Characteristics



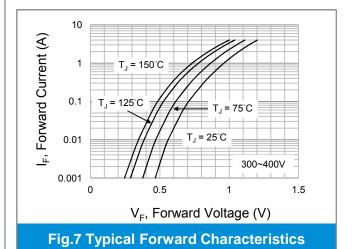
**Fig.5 Typical Reverse Characteristics** 

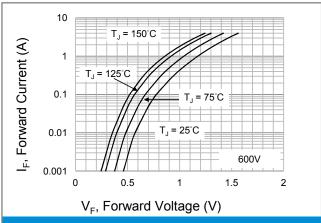


**Fig.6 Typical Forward Characteristics** 







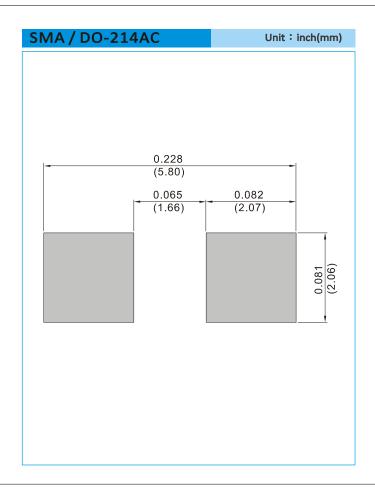


**Fig.8 Typical Forward Characteristics** 





### MOUNTING PAD LAYOUT



### ORDER INFORMATION

· Packing information

T/R - 7.5K per 13" plastic Reel

T/R - 1.8K per 7" plastic Reel





### Part No\_packing code\_Version

ES2A\_R1\_00001 ES2A\_R2\_00001

### For example :



Packing Code XX			Version Code XXXXX				
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code	
Tape and Ammunition Box (T/B)	Α	N/A	0	HF	0	serial number	
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number	
Bulk Packing (B/P)	В	13"	2				
Tube Packing (T/P)	Т	26mm	X				
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y				
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U				
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D				





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