






1.0 Amp. Surface Mount Glass Passivated Ultrafast Recovery Rectifier

DO-214AC (SMA) 	Voltage 50 to 200 V	Current 1.0 A	
			
	FEATURES <ul style="list-style-type: none"> • Low profile package • Ideal for automated placement • Ultrafast recovery time for high efficiency • Low power losses • Low forward voltage drop • High forward surge current capability • Solder dip 260°C, 10s • AEC-Q101 qualified • Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC • Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C 		   RoHS COMPLIANT
	MECHANICAL DATA <ul style="list-style-type: none"> • Case: DO-214AC (SMA). Epoxy meets UL 94V-0 flammability rating. • Polarity: Color band denotes cathode end. • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. • HE3 suffix for high reliability grade, meets JESD 201 class 2 whisker test. 		
TYPICAL APPLICATIONS Used in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive and telecommunication.			

Maximum Ratings and Electrical Characteristics at 25°C

Marking Code		FUES1A	FUES1B	FUES1D
		UA	UB	UD
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	50	100	200
V_{RMS}	Maximum RMS Voltage (V)	35	70	140
V_{DC}	Maximum DC Blocking Voltage (V)	50	100	200
$I_{F(AV)}$	Forward current at $T_L = 145^\circ\text{C}$	1.0 A		
I_{FSM}	8.3 ms. peak forward surge current (Jedec Method)	30 A		
V_F	Max. Instantaneous Forward Voltage Drop at 1.0A at 0.6A	0.920 V 0.865 V		
I_R	Maximum DC Reverse Current $T_j = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j = 125^\circ\text{C}$	1 μA 25 μA		
T_{rr}	Maximum Reverse Recovery Time (0.5/1/0.25A)	25 ns		
C_j	Typical Junction Capacitance (1MHz; -4V)	8 pF		
$R_{th(j-c)}$ $R_{th(j-a)}$	Maximum Thermal Resistance (5x5 mm ² x 130 μm Copper Area)	27 $^\circ\text{C/W}$ 75 $^\circ\text{C/W}$		
$T_j - T_{stg}$	Operating Junction and Storage Temperature Range	-55 to + 175 $^\circ\text{C}$		

Electrical Characteristics at $T_j = -40^\circ\text{C}$ to + 150 $^\circ\text{C}$

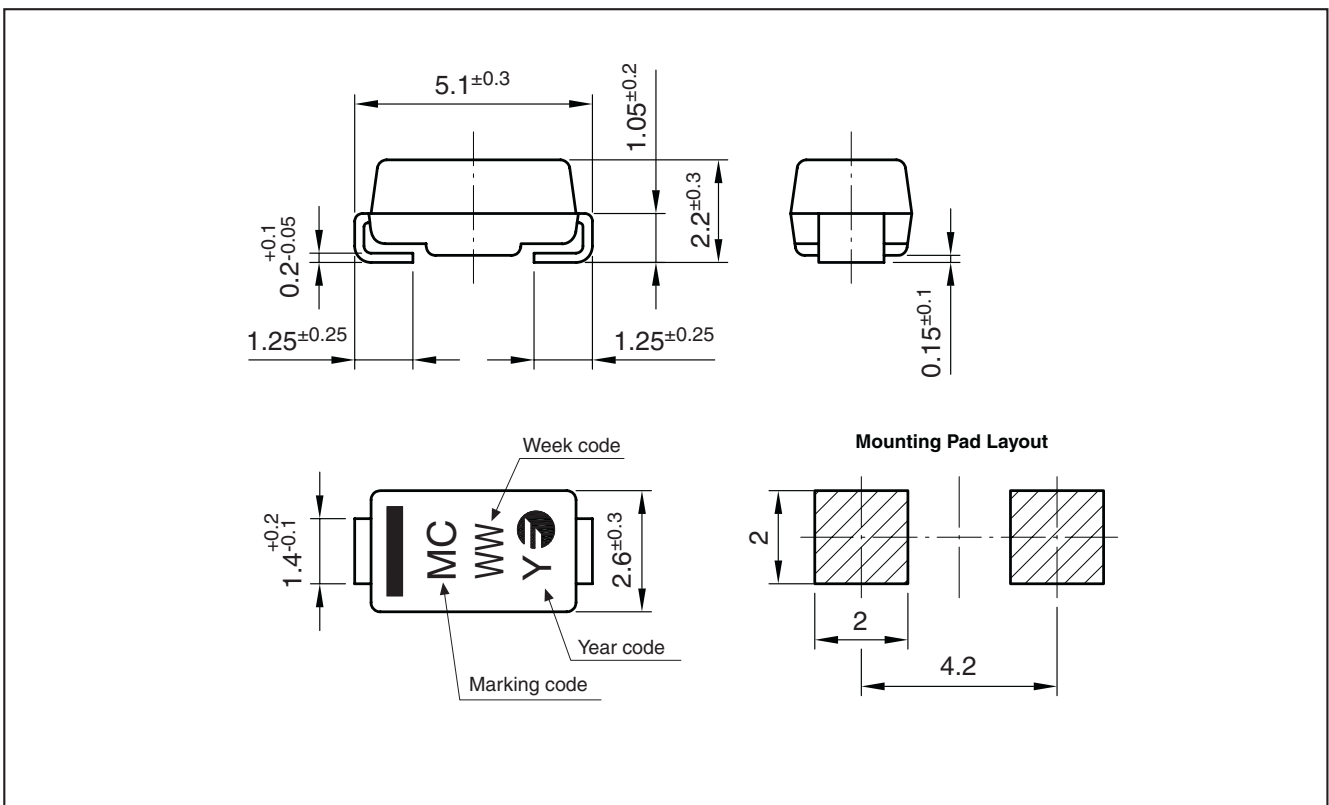
V_F	Max. forward voltage drop at $I_F = 1\text{ A}$	1.05 V
I_R	Maximum DC Reverse Current at rated DC Blocking Voltage	1500 μA

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Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FUES1D TRTB	TRTB	13" diameter tape and reel	7,500	0.060
FUES1D HE3 TRTB	TRTB	13" diameter tape and reel	7,500	0.060

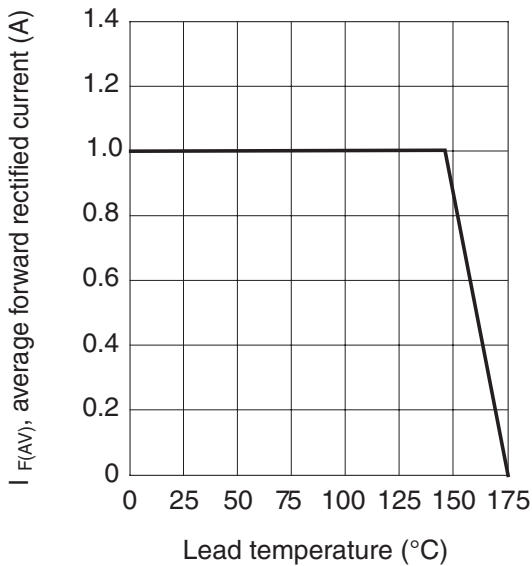
Package Outline Dimensions: (mm) DO-214AC (SMA)



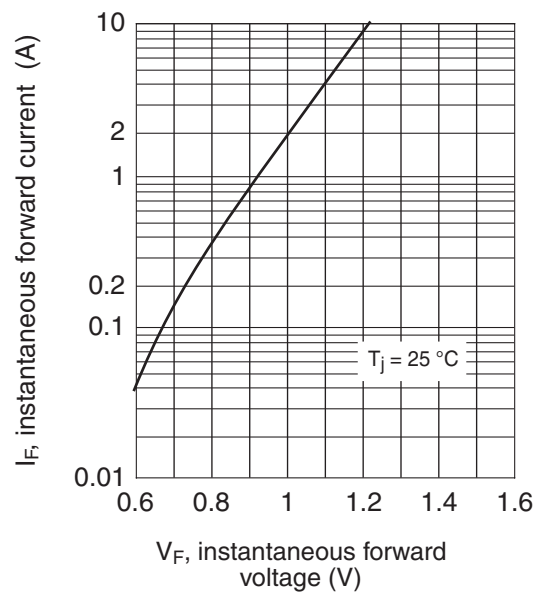
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Ratings and Characteristics (Ta 25 °C unless otherwise noted)

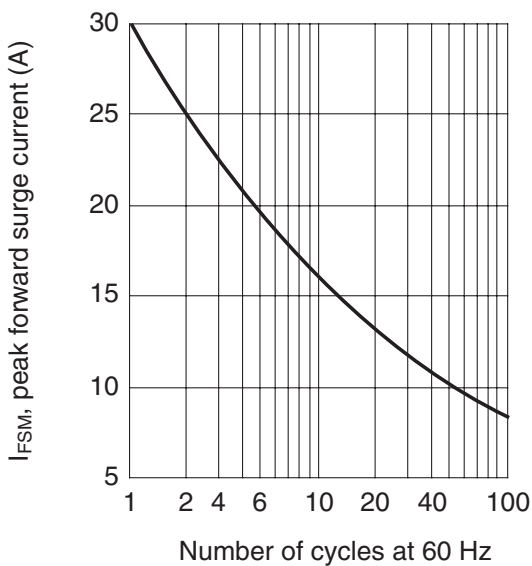
FORWARD CURRENT DERATING CURVE



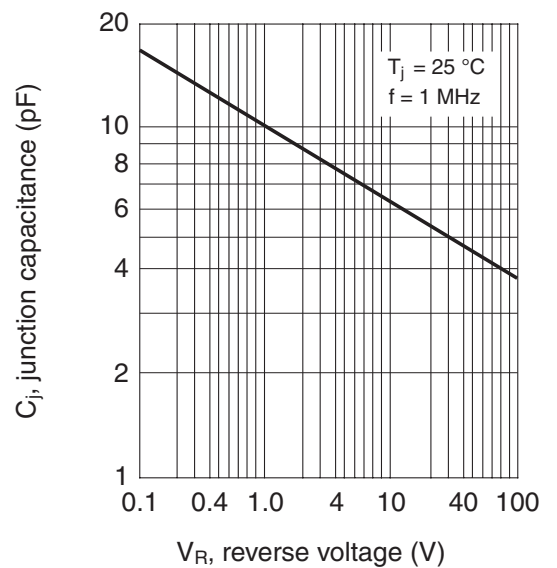
TYPICAL FORWARD CHARACTERISTIC



MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE



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