






1.0 Amp. Surface Mount Ultrafast Recovery Avalanche Rectifier

DO-214AC (SMA) 	Voltage 800 to 1000 V	Current 1.0 A	
			
	FEATURE <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

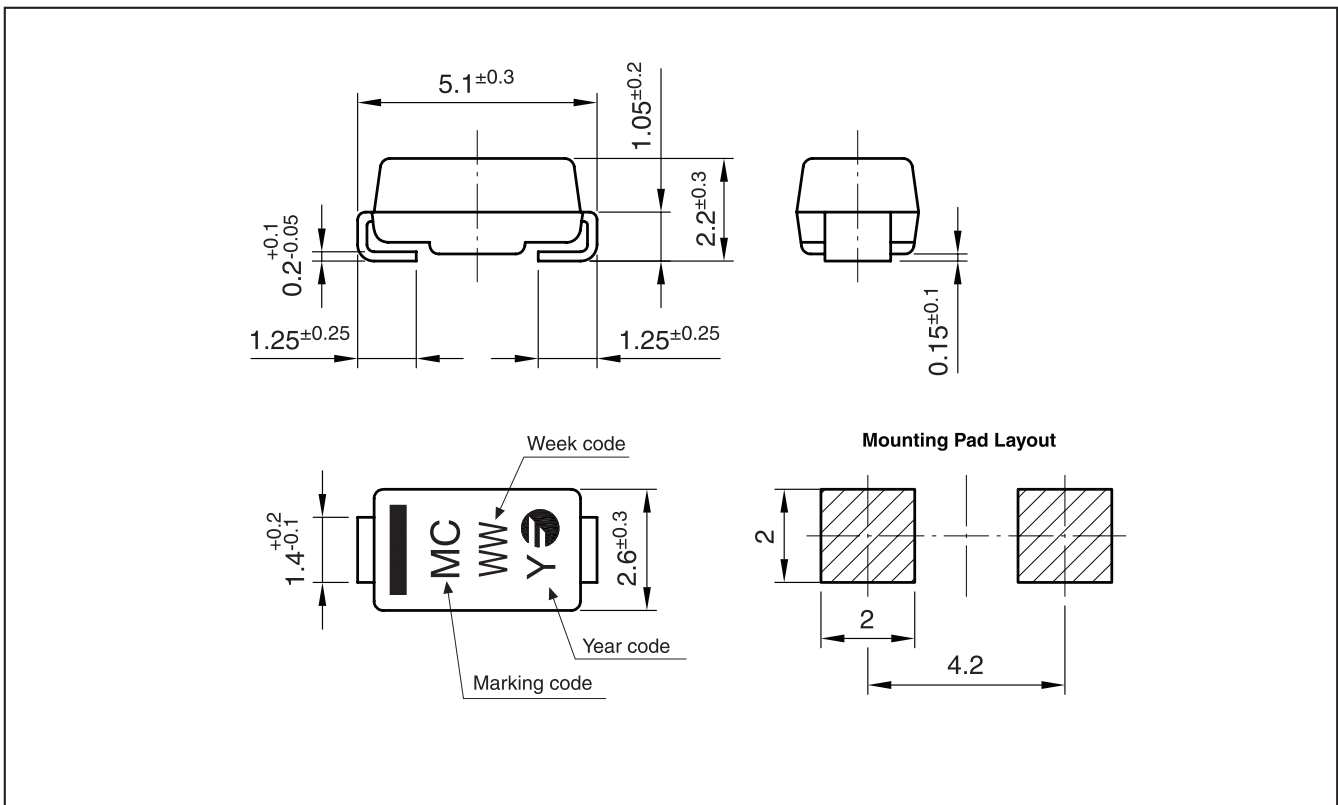
Marking Code		FES1K	FES1M
		UX	U8
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	800	1000
V_{RMS}	Maximum RMS Voltage (V)	560	700
V_{DC}	Maximum DC Blocking Voltage (V)	800	1000
V_{BR}	Avalanche Breakdown Voltage at 100 μ A	900 ÷ 1000 V	-
$I_{F(VA)}$	Forward current at $T_L = 110$ °C	1.0 A	
I_{FSM}	8,3 ms. peak forward surge current (Jedec Method)	30 A	
V_F	Maximum Instantaneous Forward Voltage at 1.0 A	1.5 V	
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_j = 25$ °C	5 μ A
		$T_j = 125$ °C	50 μ A
T_{rr}	Maximum Reverse Recovery Time (0,5/1/0,25A)	120 ns	
C_j	Typical Junction Capacitance (1MHz; -4V)	8 pF	
$R_{th(j-c)}$	Typical Thermal Resistance	27 °C/W	
$R_{th(j-a)}$	(5x5 mm ² x 130 μ m Cooper Area)	75 °C/W	
$T_j - T_{stg}$	Operating Junction and Storage Temperature Range	- 55 to 150 °C	
E_{RSM}	Maximum non repetitive peak reverse Avalanche Energy $T_j = 25$ °C, $I_{(BR)R} = 1$ A	40 mJ	

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Ordering information

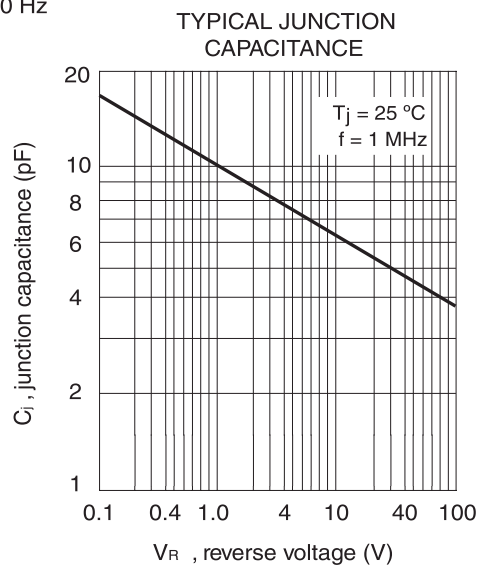
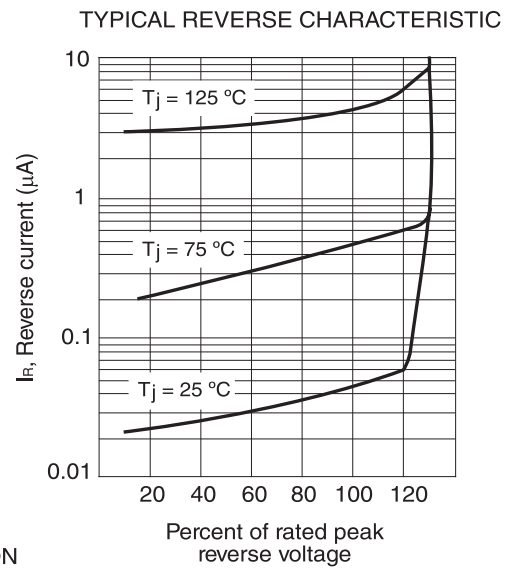
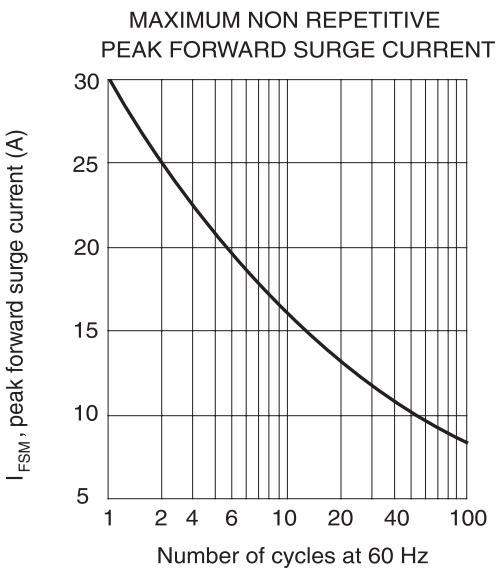
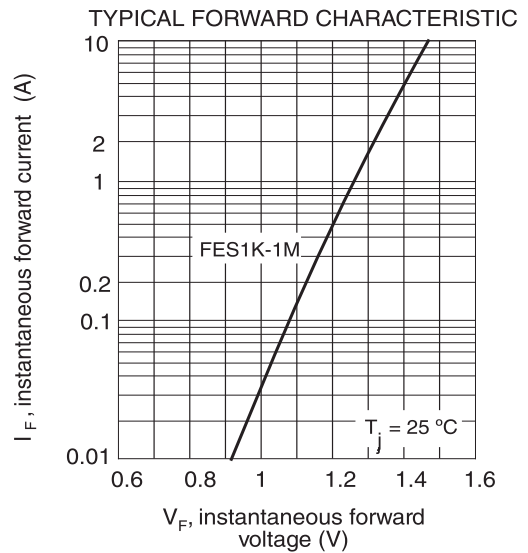
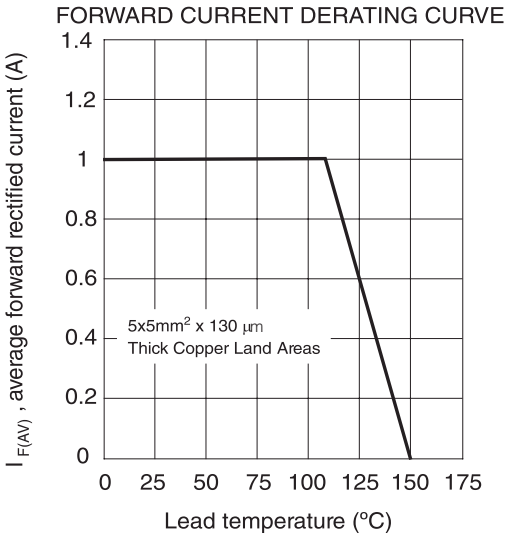
PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FES1K TRTB	TRTB	13" diameter tape and reel	7,500	0.060
FES1K HE3 TRTB	TRTB	13" diameter tape and reel	7,500	0.060

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



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



1.0 Amp. Surface Mount Ultrafast Recovery Avalanche Rectifier**Revision History**

DATE	REVISION	DESCRIPTION OF CHANGES
15-Jan-2013	0	Original Data Sheet
09-Dec-2013	1	Updated IR

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