

Super-Fast Rectifiers

ES1MF

Features

- For surface mounted applications
- Low profile package
- Low forward voltage drop
- High surge current capability
- RoHS Compliant



Mechanical Data

- Case: SMAF molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end

Maximum Ratings (@T_A = 25°C unless otherwise specified)

Characteristic	Symbol	ES1MF	Units
Peak repetitive reverse voltage	V _{RRM}	1000	V
RMS reverse voltage	V _{RMS}	700	V
DC blocking voltage	V _{DC}	1000	V
Maximum average forward output current	I _{F(AV)}	1.0	A
Peak forward surge current, 8.3ms single half-sine-wave	@T _J = 25°C I _{FSM}	30	A

Thermal Characteristics

Parameter	Symbol	ES1MF	Units
Typical thermal resistance (Note 1)	R _{θJA}	78	°C /W
	R _{θJC}	18	
	R _{θJL}	20	
Operating junction temperature range	T _J	- 55 ---- + 150	°C
Storage temperature range	T _{STG}	- 55 ---- + 150	°C

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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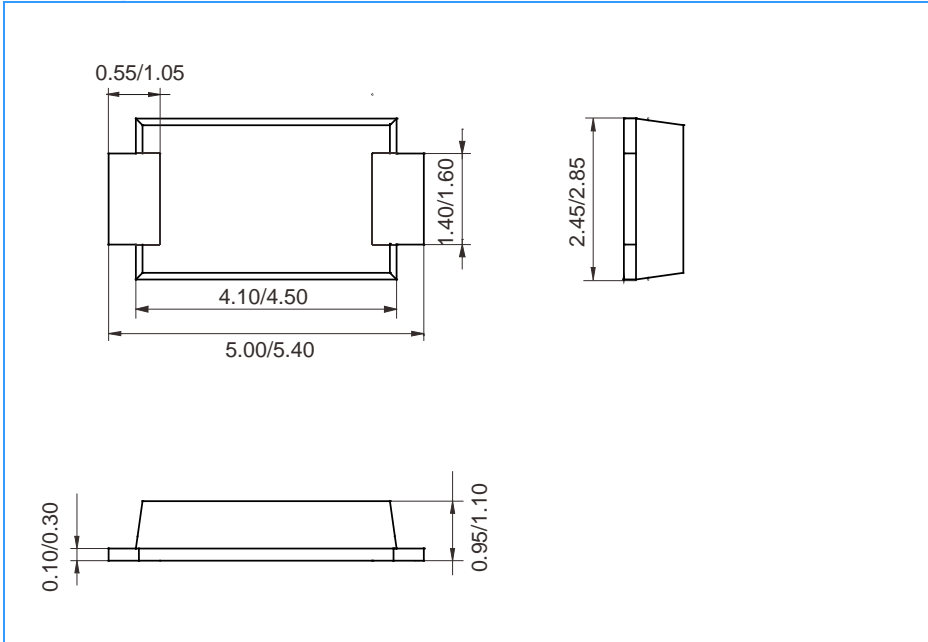
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Typ.	Max.	Units
Maximum instantaneous forward voltage	V_F	$I_F=1.0\text{A}$	--	2.5	V
Maximum Reverse current	I_R	Rated V_R	@ $T_A=25^\circ\text{C}$	10	μA
			@ $T_A=125^\circ\text{C}$	200	
Maximum Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}, I_{RM}=1\text{A}, I_{R(REC)}=0.25\text{A}$	--	35	ns

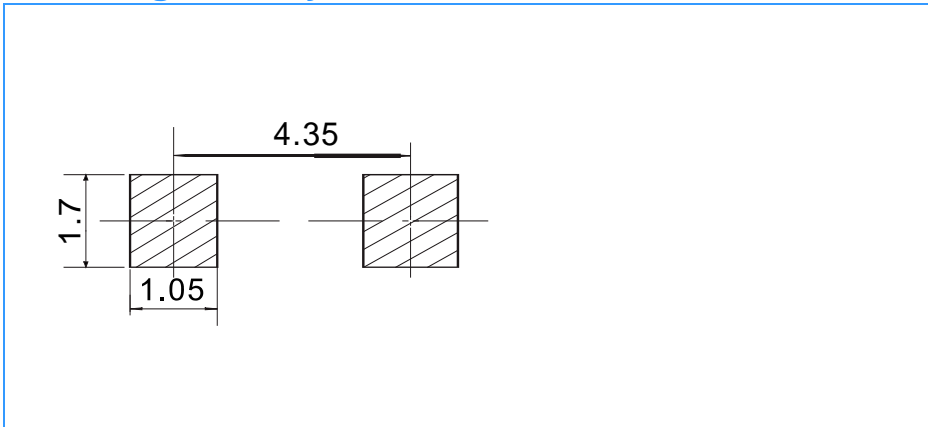
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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping
ES1MF	ES1MF	SMAF	10000/Tape&Reel