

Surface Mount Rectifier

M30

Features

- For surface mounted applications
- Ideal for automated placement
- Low forward voltage drop
- High forward surge current capability
- RoHS compliant with Halogen-free



Mechanical Data

- Case: SMA 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 (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	M30	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	3000	V
RMS Reverse Voltage	V_{RMS}	2100	V
DC Blocking Voltage	V_{DC}	3000	V
Average Forward Output Current	I_{F_AV}	1.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I_{FSM}	30	A

Thermal Characteristics

Parameter	Symbol	M30	Unit
Typical Thermal Resistance *1	$R_{\theta JA}$	70	$^\circ\text{C/W}$
	$R_{\theta JC}$	25	
	$R_{\theta JL}$	30	
Operating Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note *1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

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

Parameter	Symbol	Test Condition		Typ.	Max.	Unit
Instantaneous Forward Voltage	V_F	$I_F = 1.0\text{A}$		-	2.0	V
Reverse Current	I_R	Rated V_R	@ $T_A = 25^\circ\text{C}$	-	5	μA
			@ $T_A = 125^\circ\text{C}$	-	200	

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Ratings and Characteristic Curves (@ $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

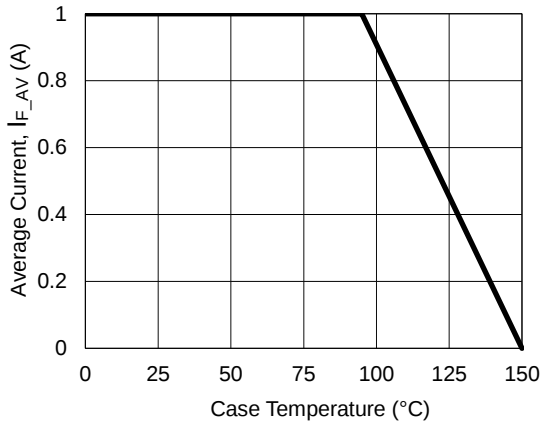


Fig.2 Surge Current Derating Curve

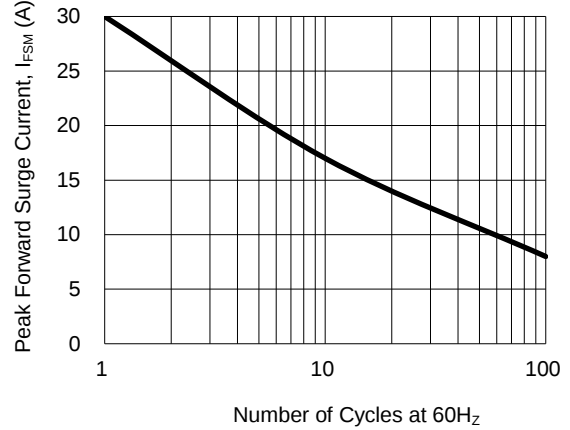


Fig.3 Typical Forward Voltage Characteristic

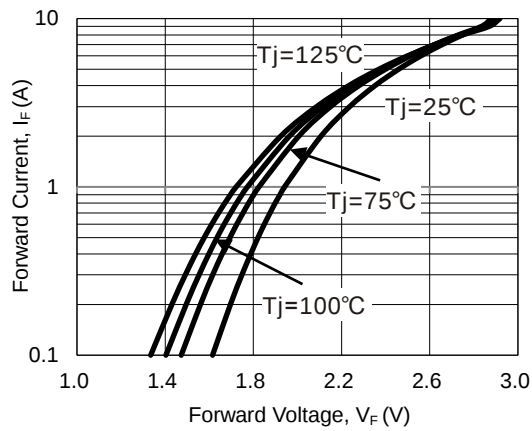
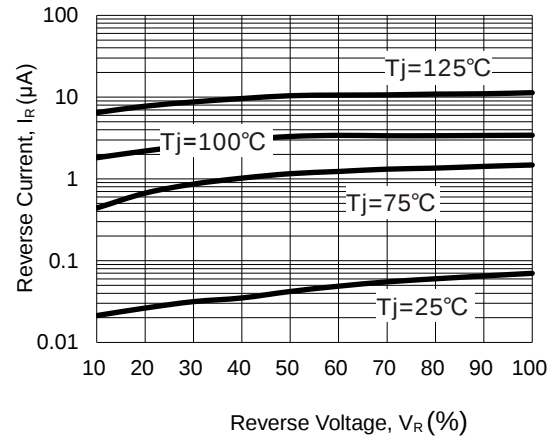


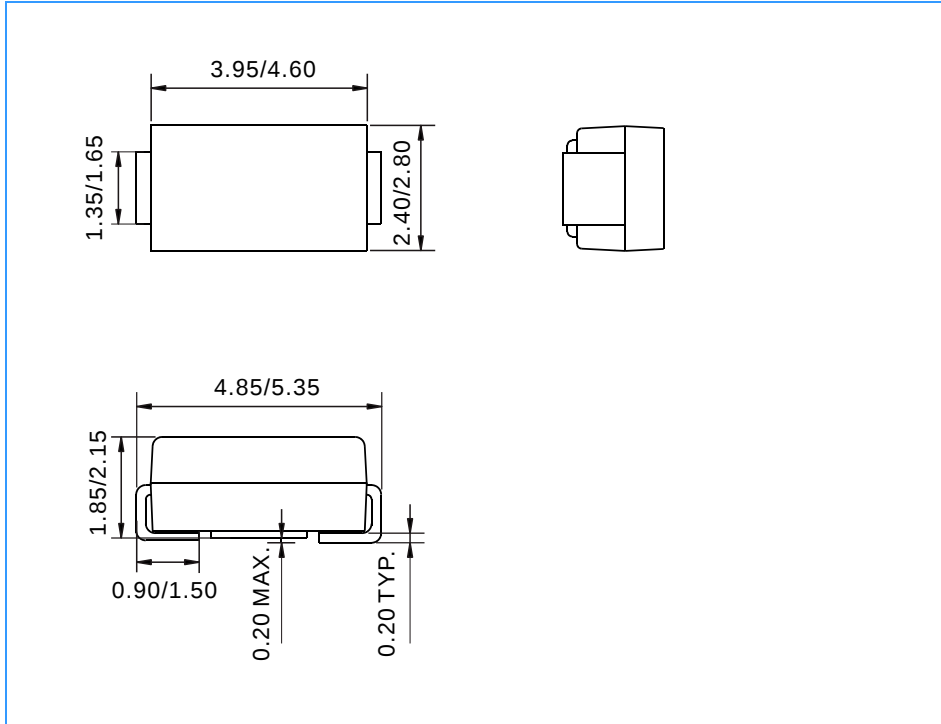
Fig.4 Typical Reverse Characteristic



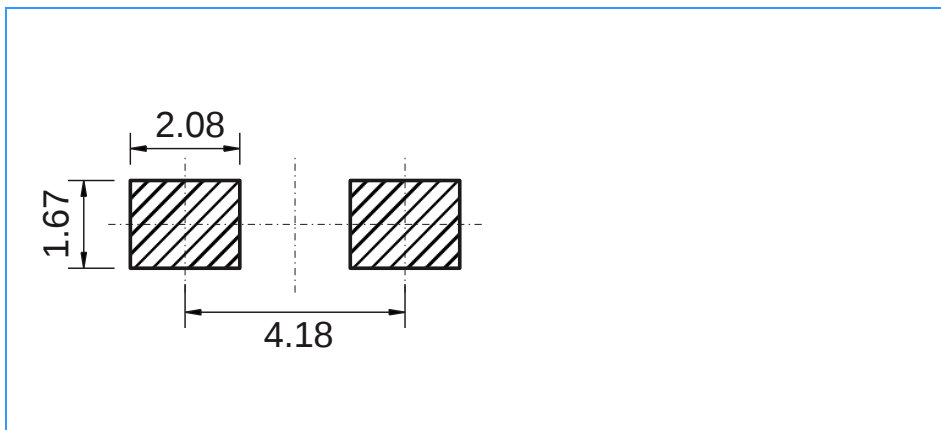
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Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
M30	M30	SMA	5000 / Tape & Reel