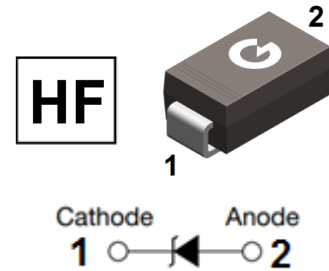


Surface Mount Rectifier

M20

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	M20	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	2000	V
RMS Reverse Voltage	V_{RMS}	1400	V
DC Blocking Voltage	V_{DC}	2000	V
Maximum 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	M20	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

Surface Mount Rectifier

M20

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

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2\mu\text{A}$		2000	-	-	V
Maximum Instantaneous Forward Voltage	V_F	$I_F = 1.0\text{A}$		-	-	1.3	V
Maximum Reverse Current	I_R	Rated V_R	@ $T_A = 25^\circ\text{C}$	-	-	10	μA
			@ $T_A = 125^\circ\text{C}$	-	-	150	
Diode capacitance	C_J	$V_R = 4\text{V}$, $f = 1\text{MHz}$		-	4.64	-	pF

Surface Mount Rectifier

M20

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

Fig.1 Forward Current Derating Curve

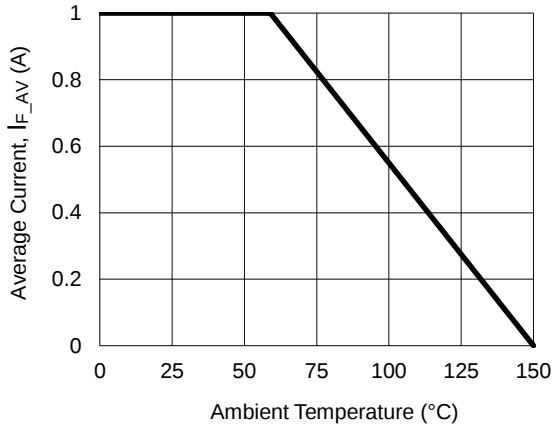


Fig.2 Surge Current Derating Curve

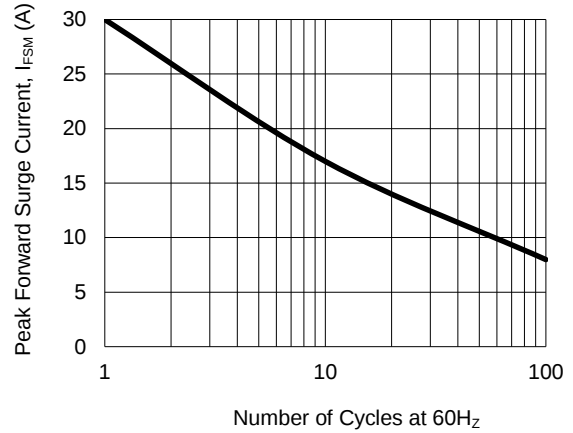


Fig.3 Typical Forward Voltage Characteristic

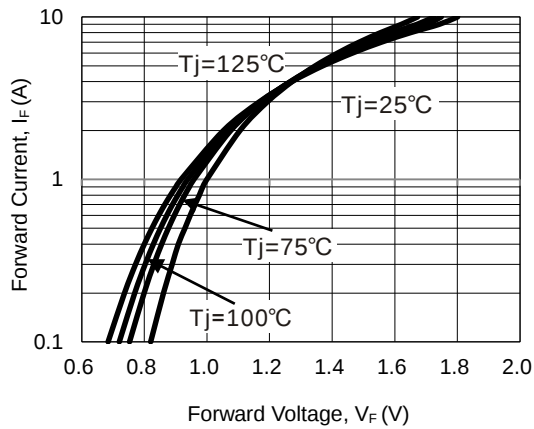


Fig.4 Typical Reverse Characteristic

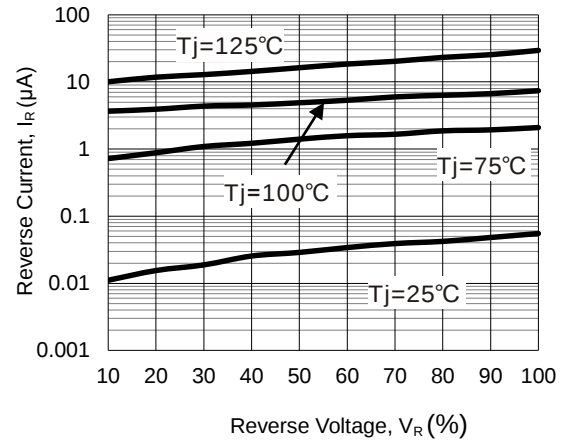
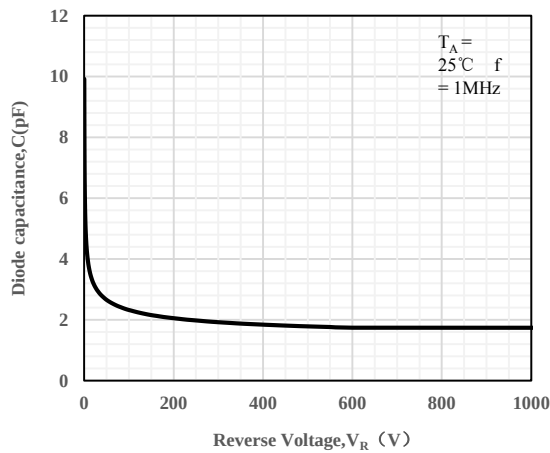


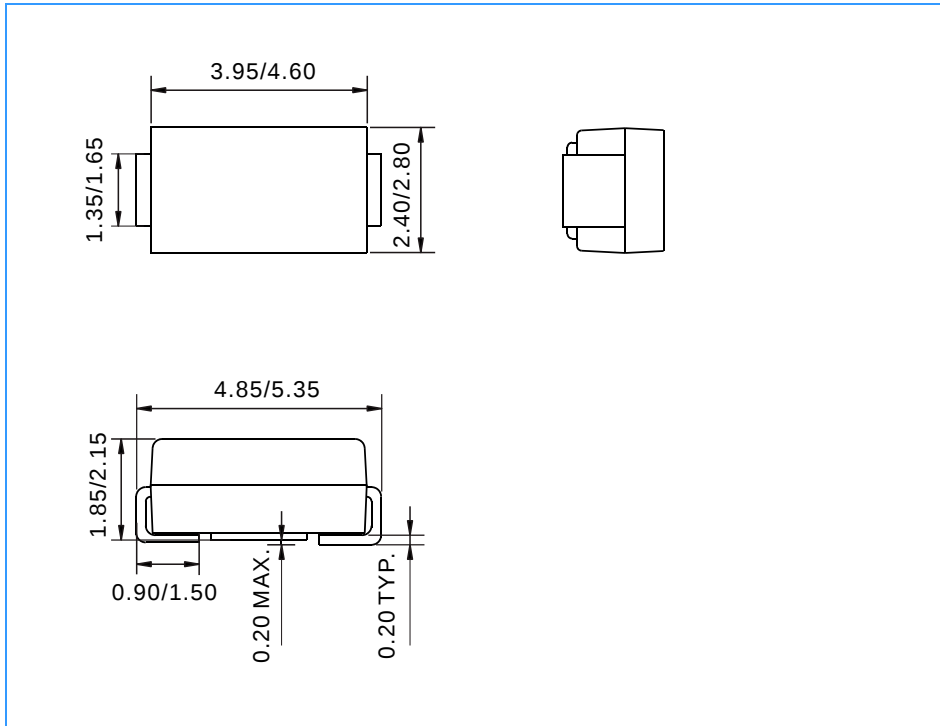
Fig.5 Capacitance vs. Reverse Voltage



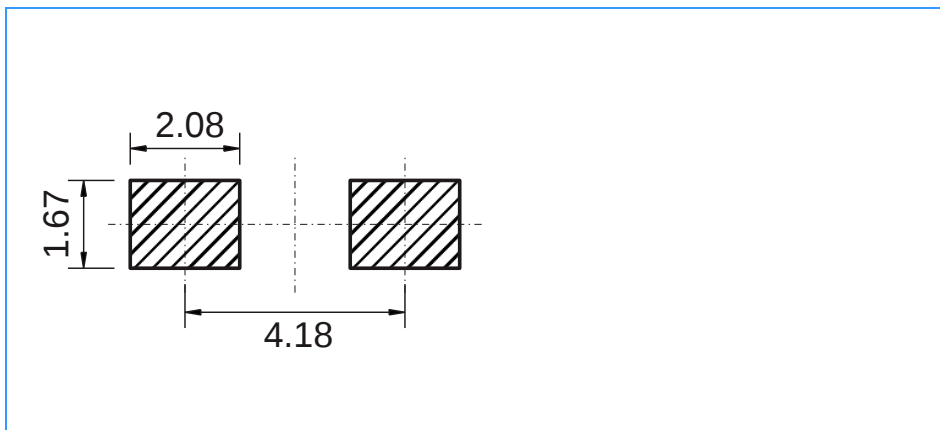
Surface Mount Rectifier

M20

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
M20	M20	SMA	5000 pcs / Tape & Reel