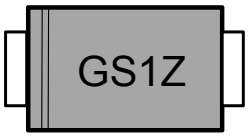
M20A
Surface Mount General Purpose Silicon Rectifiers

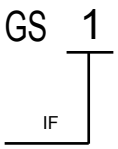
VOLTAGE RANGE
2000 Volts
CURRENT
1.0 Ampere

FEATURES

* Ideal for surface mount applications
* Easy pick and place
* Built-in strain relief
* Super fast recovery time for high speed switching







MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Metallurgically bonded construction
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.063 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbols	M20A	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	2000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30	A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.15	V
Maximum Reverse Current T_J = 25 °C T_J = 125 °C	I_R	5 50	μA
Typical Junction Capacitance 1)	C_j	20	pF
Typical Thermal Resistance 2)	$R_{\theta JA}$	95	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

Measured at 1 MHz and applied reverse voltage of 4 V D.C
P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

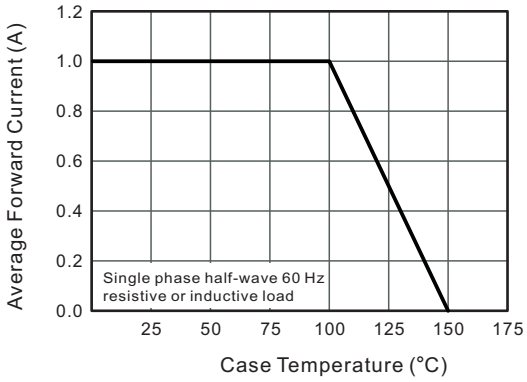


FIG.2-TYPICAL FORWARD CHARACTERISTICS

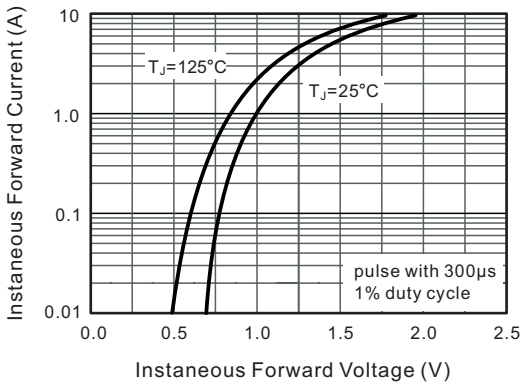


FIG.5- TYPICAL REVERSE CHARACTERISTICS

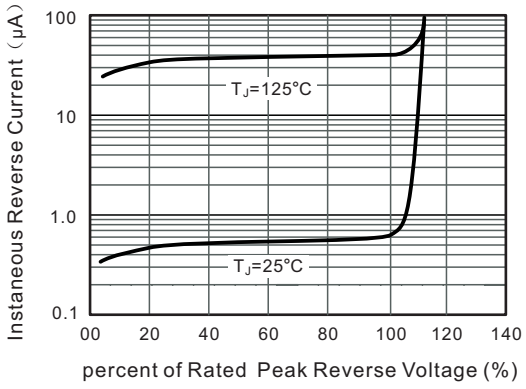


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

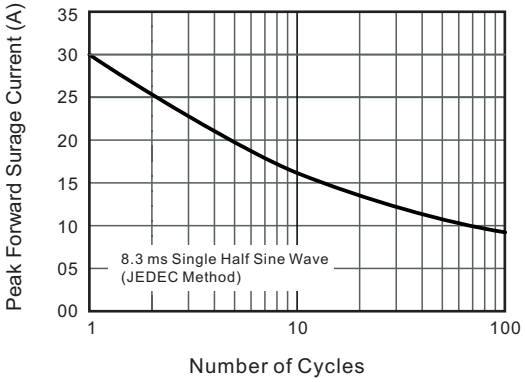
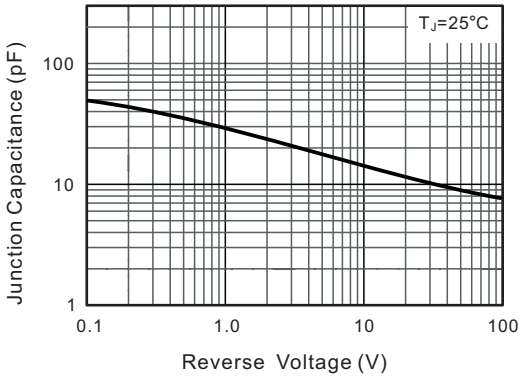


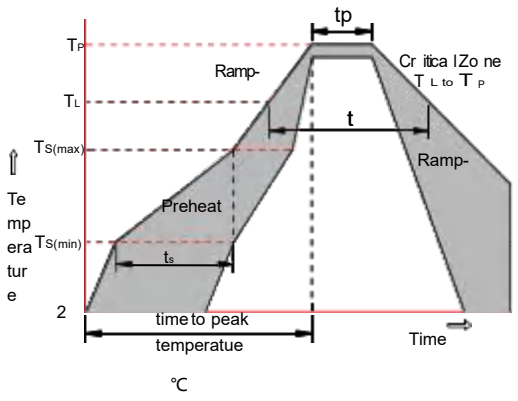
FIG.6-TYPICAL JUNCTION CAPACITANCE



Soldering parameters

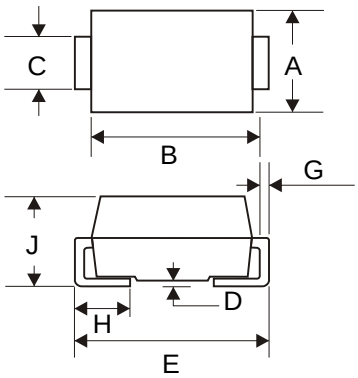
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition

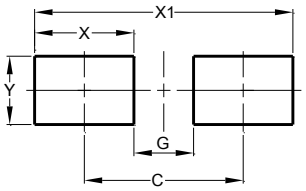


Package Dimensions & Suggested Pad Layout

SMA



SMA		
Dim	**Min**	**Max**
A	2.40	2.79
B	3.99	4.50
C	1.32	1.47
D	-	0.20
E	4.93	5.28
G	0.15	0.31
H	0.76	1.52
J	1.98	2.29
All Dimensions in mm		



Dimensions	Value (in mm)
C	4.20
G	1.90
X	2.30
X1	6.50
Y	2.00

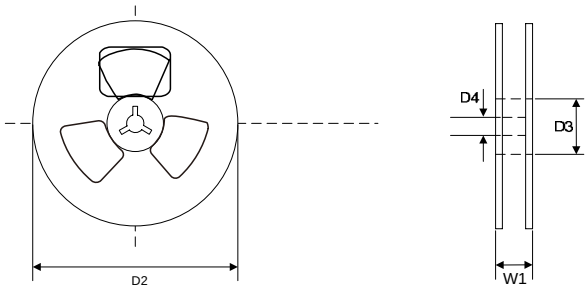
Tape & rell specification

Tape



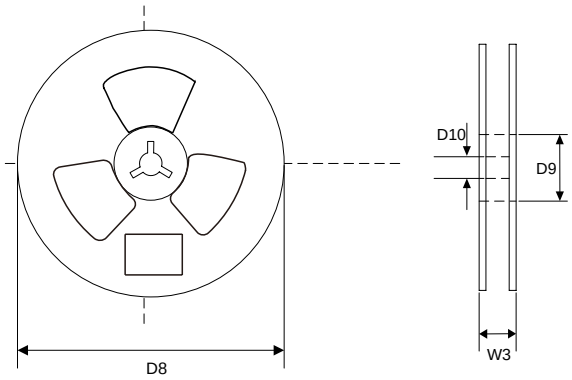
Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.60±0.20
D1	1.60±0.20
E	1.75±0.20
F	5.50±0.15
W	12.00±0.25
A0	2.75±0.20
B0	5.25±0.20
K0	2.45±0.25
T	0.20±0.10

7” Reel



D2	176.0±5.0
D3	55.0Min.
D4	14.0±2.5
W1	14.0±2.5
Quantity: 2000PCS	

13” Reel



D8	330.0±5.0
D9	73.0Min.
D10	14.0±2.5
W3	14.0±2.5
Quantity: 5000PCS	