

## Features

- Glass passivated chip junction
- Low forward voltage drop
- Ultra-fast recovery time, high efficiency
- Moisture sensitivity: level 1, per J-STD-020



Package: DO-214AB (SMC)

## Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

## Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	GSMURS420	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	V
Maximum Average Forward Rectified Current (See Figure 1.)	I <sub>F(AV)</sub>	4	A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed On Rated Load)	I <sub>FSM</sub>	80	A
Typical Thermal Resistance <sup>1</sup>	Junction-Ambient	R <sub>θJA</sub>	45
	Junction-Case	R <sub>θJC</sub>	8.5
Operating Junction Temperature Range	T <sub>J</sub>	- 55 to + 150	°C
Storage Temperature Range	T <sub>STG</sub>	- 55 to + 150	

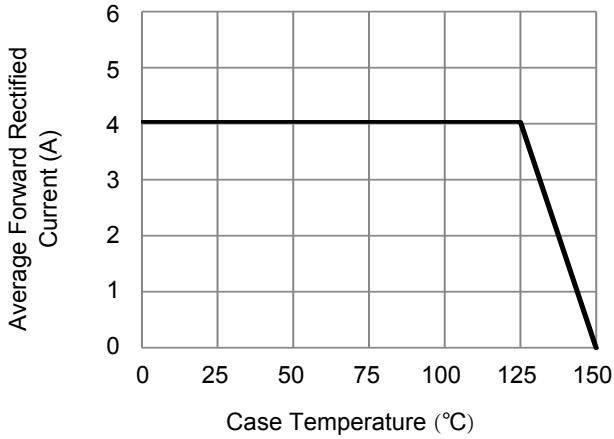
Note:

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 30×30mm copper pads.

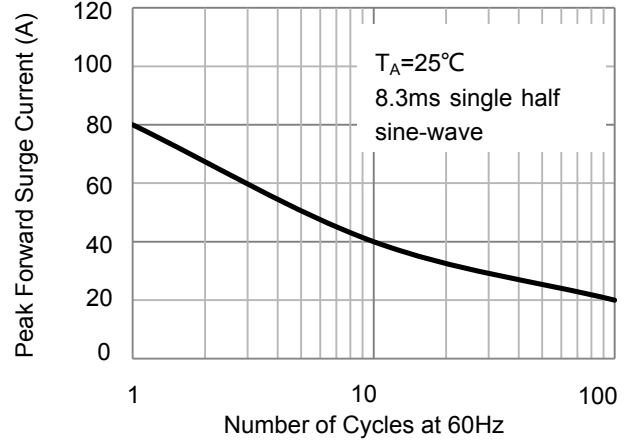
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	GSMURS420	Unit
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =4A, T <sub>J</sub> =25°C	0.89	V
		I <sub>F</sub> =4A, T <sub>J</sub> =150°C	0.71	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	T <sub>J</sub> =25°C	5	μA
		T <sub>J</sub> =150°C	150	
Maximum Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	25	ns
Junction Capacitance	C <sub>J</sub>	4.0V, 1MHz	65	pF

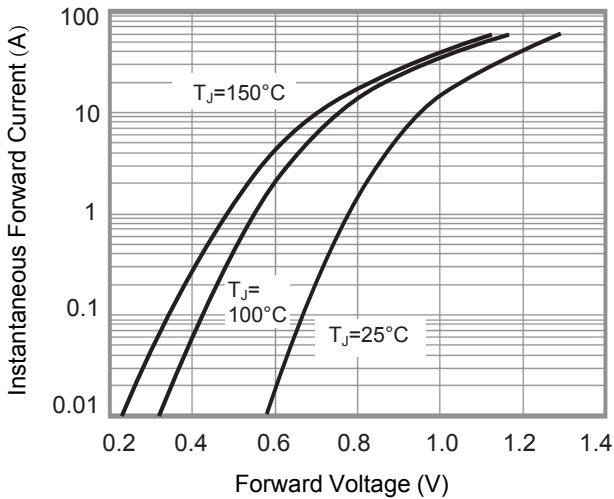
## Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)



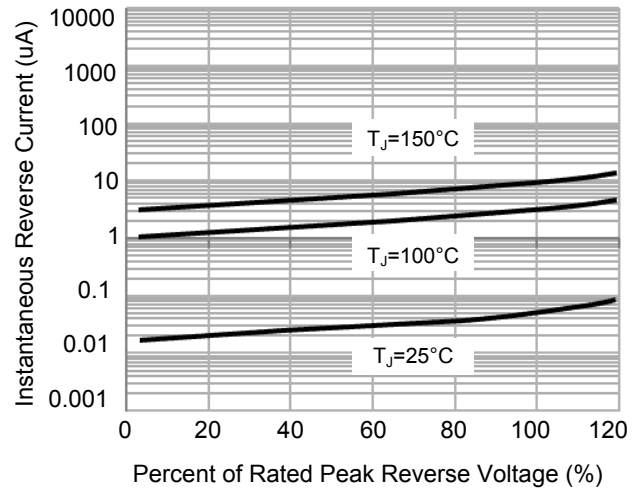
**Figure 1. Forward Current Derating Curve**



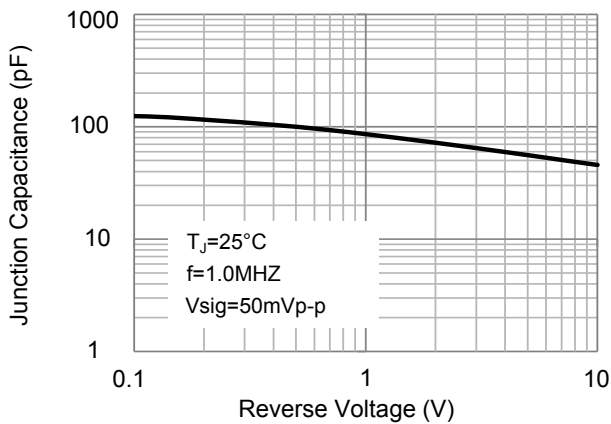
**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**



**Figure 3. Typical Instantaneous Forward Characteristics**

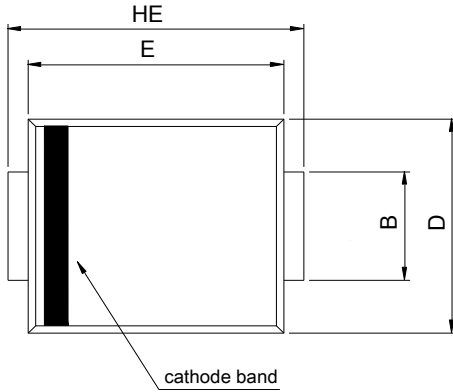


**Figure 4. Typical Reverse Leakage Characteristics**

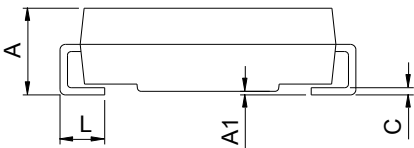


**Figure 5. Typical Junction Capacitance**

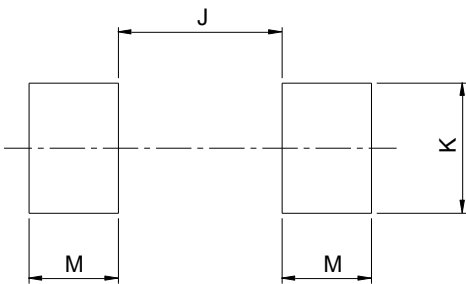
## Package Outline Dimensions DO-214AB (SMC)



SMC (DO-214AB)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.90	3.20	0.114	0.126
C	0.15	0.31	0.006	0.012
D	5.58	6.22	0.220	0.245
E	6.60	7.15	0.260	0.281
HE	7.75	8.15	0.305	0.321
L	0.76	1.60	0.030	0.063



## Recommended Pad Layout



SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-