

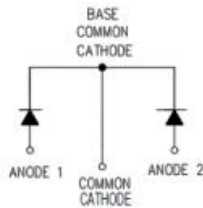
20CJQ100 SCHOTTKY RECTIFIER



Features

- 150 °C T_J operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Redundant power subsystems
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V _{RRM}	-	100	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _c =126°C, rectangular wave form	1(Per Leg) 2(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse, T _C = 25 °C	26	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	V _{F1}	@ 1A, Pulse, T _J = 25 °C	0.80	0.85	V
	V _{F2}	@ 1A, Pulse, T _J = 125 °C	0.68	0.75	V
Reverse Current (Per Leg)*	I _{R1}	@V _R = rated V _R T _J = 25 °C	0.0003	0.5	mA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	0.2	1.0	mA
Junction Capacitance(Per Leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	40	45	pF

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	25	$^{\circ}\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	65	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.13	g
Case Style	SOT-223			

Ratings and Characteristics Curves

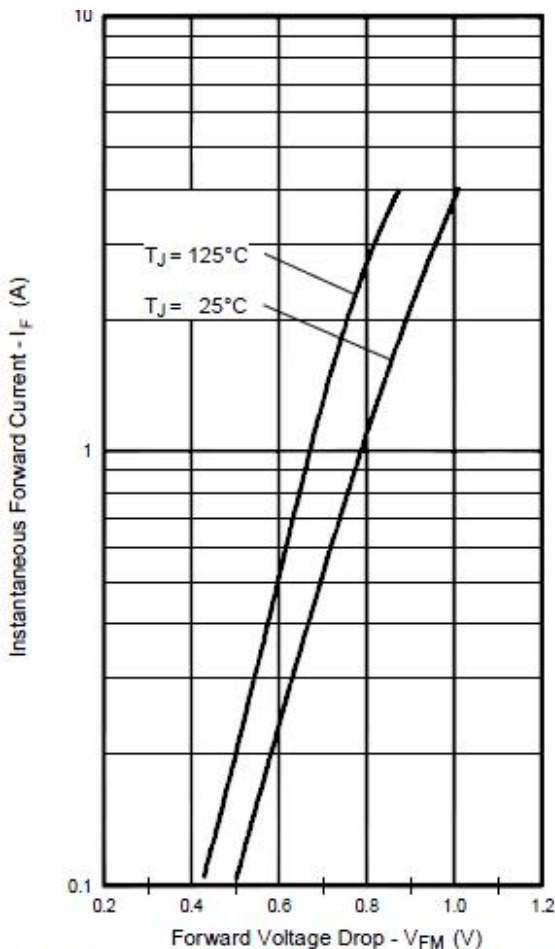


Fig. 1 Typical Forward Voltage Drop Characteristics (Per Leg)

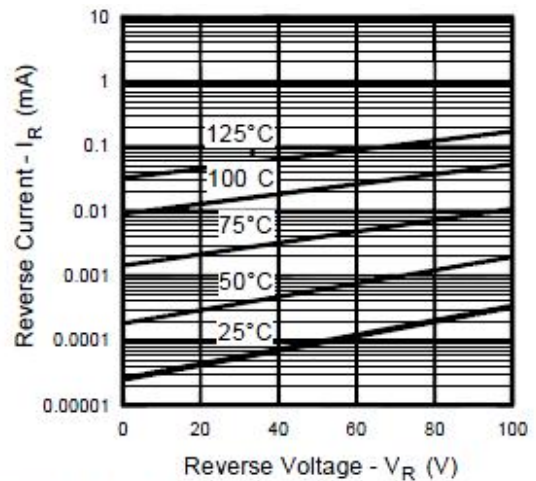


Fig. 2 Typical Values of Reverse Current Vs. Reverse Voltage (Per Leg)

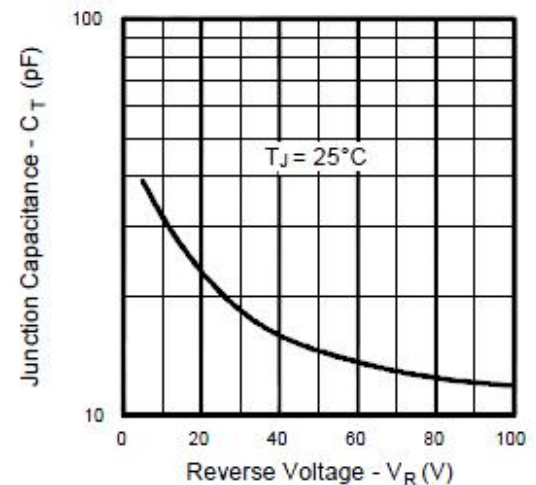
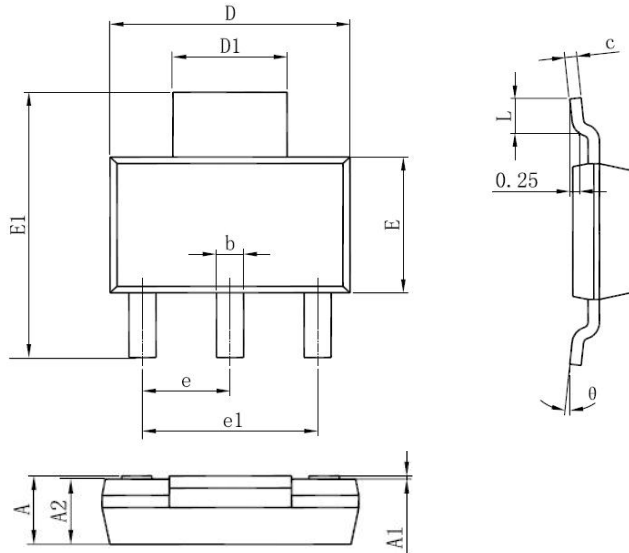


Fig. 3 Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

Mechanical Dimensions SOT-223



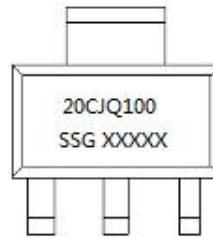
SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		0.091(BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°

Ordering Information

Device	Package	Shipping
20CJQ100	SOT-223 (Pb-Free)	3000pcs / reel
20CJQ100TR	SOT-223 (Pb-Free)	3000pcs / reel

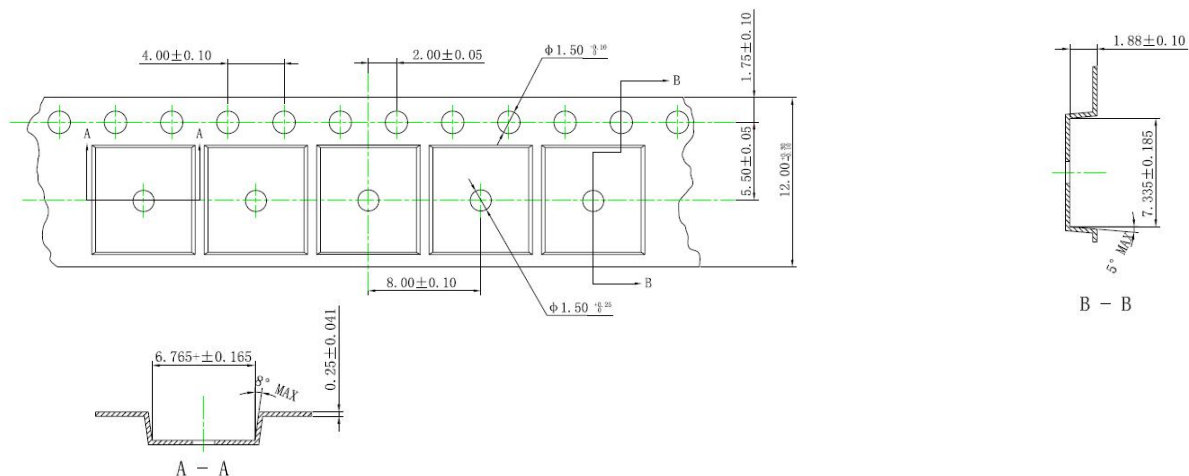
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Where XXXXX is YYWWL
 20CJQ100 = Part Name
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

Carrier Tape Specification SOT-223



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