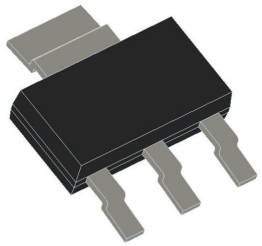
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20CJQ030 SCHOTTKY RECTIFIER

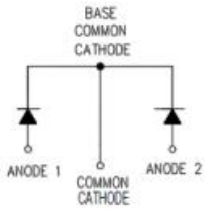


SOT-223

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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	30	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @Tc=135°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	28.8	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	V_{F1}	@ 1A, Pulse, T_J = 25 °C @ 2A, Pulse, T_J = 25 °C	0.45 -	0.50 0.69	V
	V_{F2}	@ 1A, Pulse, T_J = 125 °C @ 2A, Pulse, T_J = 125 °C	0.35 -	0.42 0.52	V
Reverse Current (Per Leg)*	I_{R1}	@V_R = rated V_R T_J = 25 °C	0.007	0.1	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	5	15	mA
Junction Capacitance(Per Leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	60	120	pF

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

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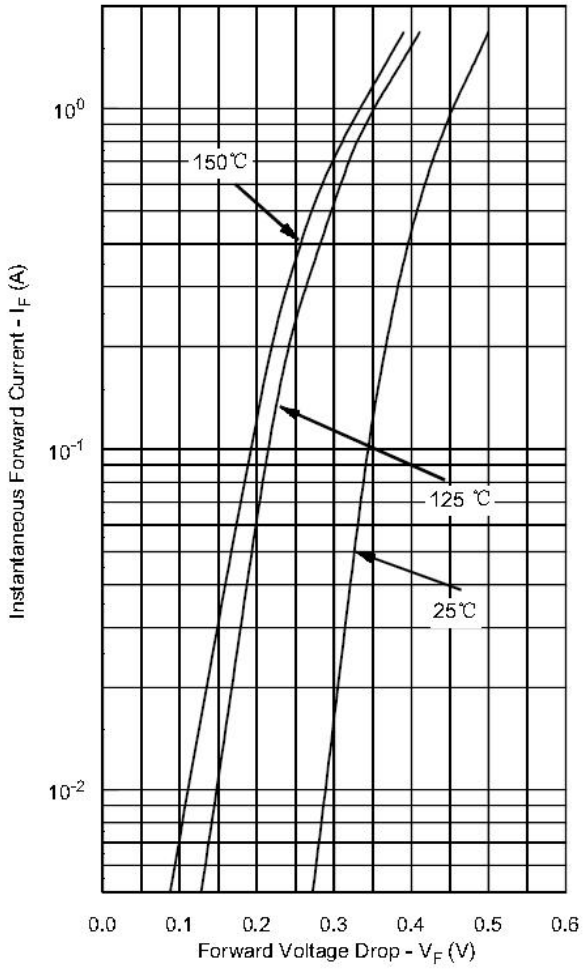
RoHS

Thermal-Mechanical Specifications:

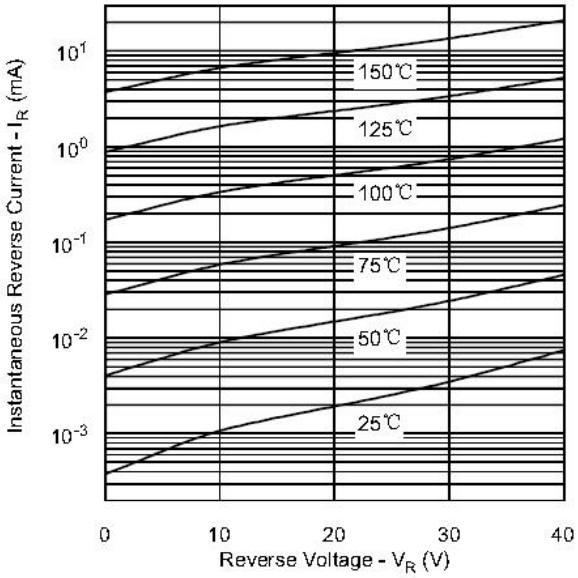
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	25	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	65	°C/W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

Ratings and Characteristics Curves

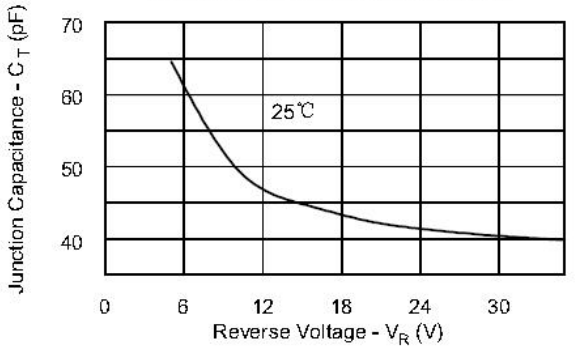
Typical Forward Characteristics



Typical Reverse Characteristics

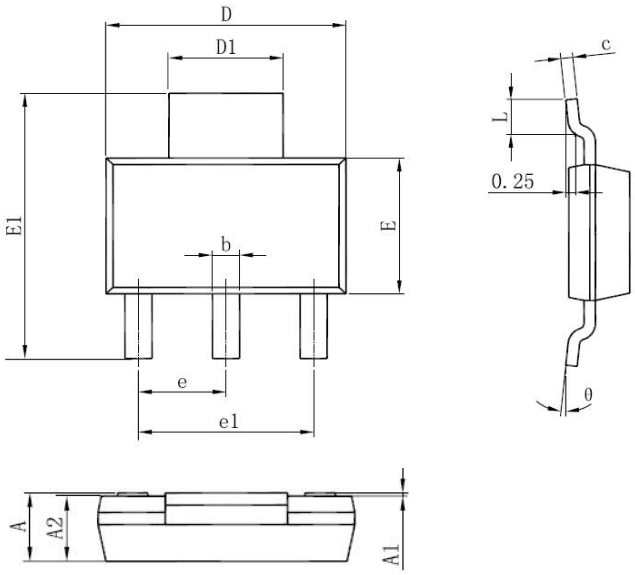


Typical Junction Capacitance



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Mechanical Dimensions SOT-223



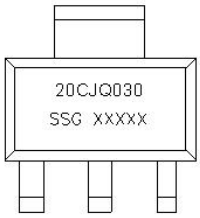
SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		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
20CJQ030	SOT-223 (Pb-Free)	3000pcs / reel
20CJQ030TR	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.

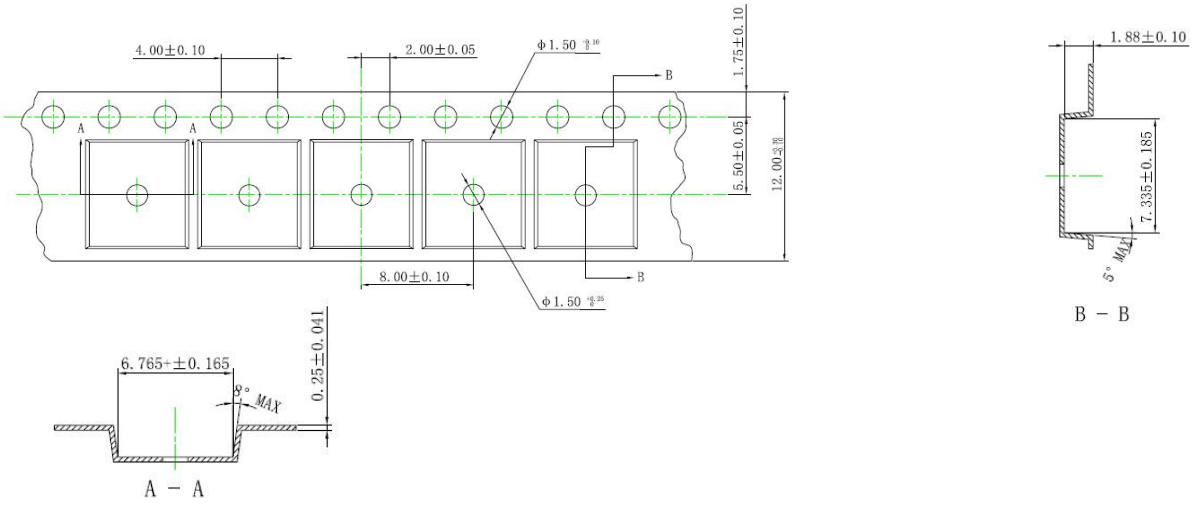
Marking Diagram



Where XXXXX is YYWWL

20CJQ030 = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Carrier Tape Specification SOT-223



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