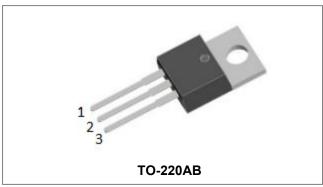






ST40100C SCHOTTKY RECTIFIER



Features

- 150 °C T_J operation
- Ultralow 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
- Trench MOS Schottky technology
- 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
- 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	$egin{array}{c} V_{RRM} \ V_{RWM} \ \end{array}$	-	100	٧
Average Rectified Forward Current	I _{F (AV)}	50% duty cycle @Tc=105°C, rectangular wave form	20(Per Leg) 40(Per Device)	Α
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	300	Α

Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 5A, Pulse, T _J = 25 °C	0.47	-	
		@ 10A, Pulse, T _J = 25 °C	0.54	-	V
		@ 20A, Pulse, T _J = 25 °C	0.68	0.75	
	V _{F2}	@ 5A, Pulse, T _J = 125 °C	0.38	-	
		@ 10A, Pulse, T _J = 125 °C	0.51	-	V
		@ 20A, Pulse, T _J = 125 °C	0.64	0.70	
Reverse Current(Per Leg)*	I _{R1}	@V _R = 70V,T _J = 25 °C	0.012	-	mΛ
		@V _R = 100V,T _J = 25 °C	0.030	1	mA
	I _{R2}	@V _R = 70V,T _J = 125 °C	10	-	mΛ
		@V _R = 100V,T _J = 125 °C	15	75	mA
Junction Capacitance(Per Leg)	Ст	$@V_R = 5V, T_C = 25 °C$ $f_{SIG} = 1MHz$	845	-	pF

Pulse width < 300 µs, duty cycle < 2%

- China Germany Korea Singapore United States
 - http://www.smc-diodes.com
 sales@ smc-diodes.com



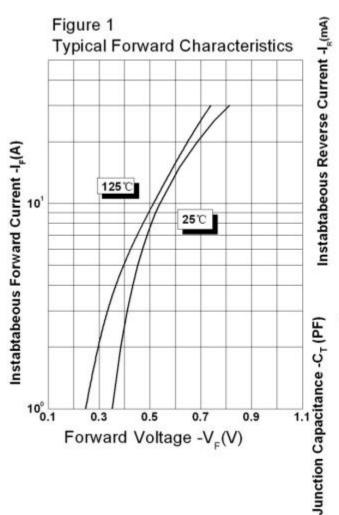




Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	TJ	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case(Per Leg)	R _{th(j-c)}	DC operation	2.0	°C/W
Approximate Weight	wt	-	2	g

Ratings and Characteristics Curves



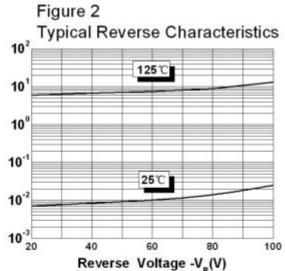
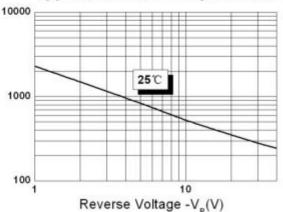


Figure 3
Typical Junction Capacitance



[•] China - Germany - Korea - Singapore - United States •

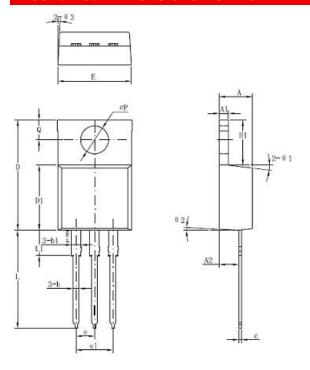
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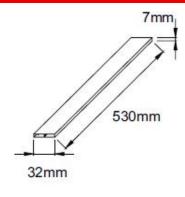


Mechanical Dimensions TO-220AB



	Dimensions in		
Symbol	millimeters		
	Min	Typical	Max
Α	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.52	2.69	2.89
b	0.71	0.81	0.96
b1	1.17	1.27	1.37
С	0.31	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
е		2.54	
e1	4.98	5.06	5.18
H1	6.04	6.24	6.44
L	12.7	13.56	13.80
L1	3.56	3.5	3.96
ФР	3.74	3.84	4.04
Q	2.54	2.74	2.94
Θ1		7°	
Θ2		3°	
Θ3		4°	

Tube Specification



Marking Diagram



Where XXXXX is YYWWL

 ST
 = Device Type

 40
 = Forward Current (40A)

 100
 = Reverse Voltage(100V)

 C
 = Configuration

 SSG
 = SSG

 SSG
 = SSG

 YY
 = Year

 WW
 = Week

 L
 = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping	
ST40100C	TO-220AB (Pb-Free)	50 pcs/ tube	

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

- China Germany Korea Singapore United States
 - http://www.smc-diodes.com sales@ smc-diodes.com •







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