





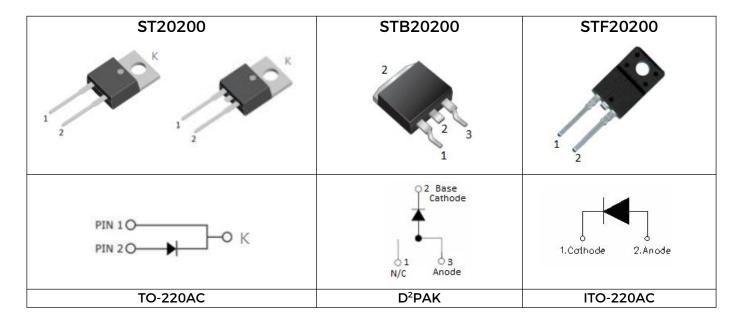
ST20200/STB20200/STF20200 SCHOTTKY RECTIFIER

Applications

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

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
- Terminals finish: Tin Lead-free plated
- 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



Maximum Ratings(limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-		
Working Peak Reverse Voltage	V_{RWM}		200	V
DC Blocking Voltage	V_R			
Average Rectified Forward Current	I _{F (AV)}	Tc=86°C(TO-220AC, D2PAK) Tc=81°C(ITO-220AC), In DC	20	А
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3ms, Half Sine pulse	250	А







Electrical Characteristics:

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop*	V _{F1} @ 20A, Pulse, T _J = 25 °C		0.86	1.60	V
	V_{F2}	@ 20A, Pulse, T ₃ = 125 °C	0.74	0.76	V
Reverse Current*	I _{R1}	$@V_R = rated V_R$ $T_J = 25 °C$	0.07	300	uA
	I _{R2}	$@V_R = rated V_R$ $T_J = 125 °C$	0.09	36	mA
Junction Capacitance	Ст	$@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz$	314	-	pF

^{*} Pulse width < 300 µs, duty cycle < 2%

Thermal-Mechanical Specifications:

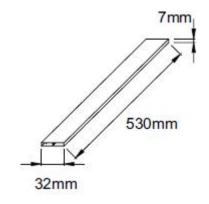
Characteristics	Symbol	ST20200	STB20200	STF20200	Units
Junction Temperature	T ₃	-55 to +150			°C
Storage Temperature	T _{stg}	-55 to +150			°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	2.0	2.0	4.0	°C/W

Tube Specification

Device	Package	Weigh t	Shipping
ST20200	TO-220AC	1.6g	50pcs / tube
STB20200	D²PAK	1.85g	800pcs / reel
STF20200	ITO-220AC	1.6g	50pcs / tube

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

Tube Specification(TO-220AC/ITO-220AC)









Ratings and Characteristics Curves

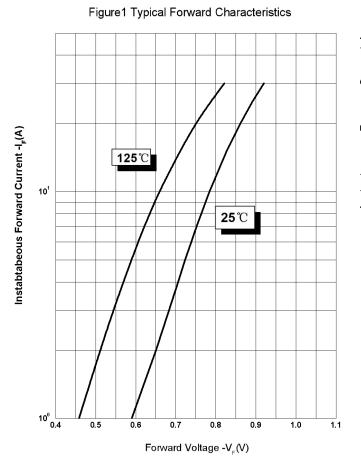


Figure 2 Typical Reverse Characteristics

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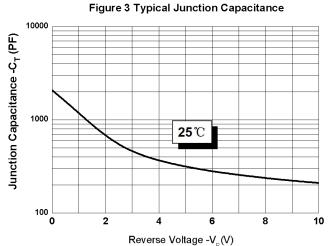
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Reverse Voltage -V_s(V)

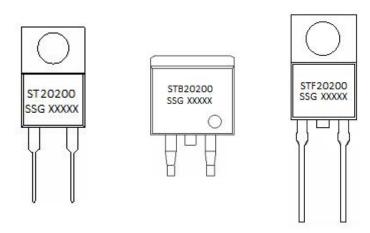








Marking Diagram



Where XXXXX is YYWWL

 ST
 = Device Type

 B/F
 = Package type

 20
 = Forward Current (20A)

 200
 = Reverse Voltage (200V)

 SSG
 = SSG

 SSG
 = SSG

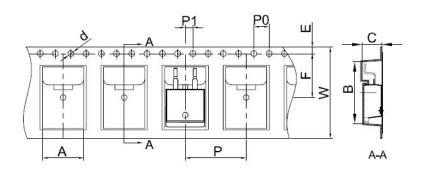
 YY
 = Year

 WW
 = Week

 L
 = Lot Number

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

Carrier Tape Specification D²PAK



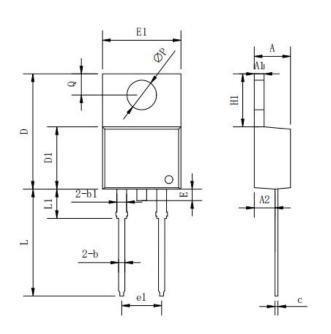
SYMBOL	Millimeters			
STMBOL	Min.	Max.		
Α	10.70	10.90		
В	16.03	16.23		
С	5.11	5.31		
d	1.45	1.65		
E	1.65	1.85		
F	11.40	11.60		
P0	3.90	4.10		
Р	15.90	16.10		
P1	1.90	2.10		
W	23.90	24.30		





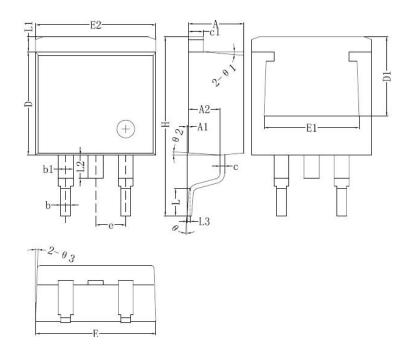


Mechanical Dimensions TO-220AC



Symbol	Dimensions in millimeters			
	Min. Typical		Max.	
Α	3.56	-	4.83	
A1	0.51	-	1.4	
A2	2.03	-	2.92	
b	0.38	-	1.02	
b1	1.14	-	1.78	
С	0.31	-	0.61	
D	14.22	-	16.51	
D1	8.38	-	9.42	
E	-	-	1.78	
E1	9.65	10.16	10.67	
el	-	5.08	-	
H1	5.84	-	6.86	
L	12.7	-	14.73	
L1	-	-	6.35	
ФР	-	3.56	-	
Q	2.54	-	3.43	

Mechanical Dimensions D²PAK



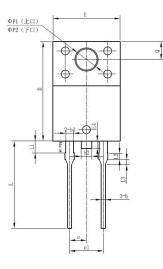
Symbol	Dimensions in millimeters		
Syllibol	Min.	Max.	
Α	4.06	4.83	
A1	0	0.26	
b	0.51	0.99	
b1	1.14	1.78	
С	0.31	0.74	
c1	1.14	1.65	
D	8.38	9.65	
D1	6.4		
E1	6.22		
E2	9.65	10.67	
е	2.54BSC		
Н	14.6	15.88	
L	1.78	2.8	
L1	-	1.68	
L2	- 2.2		
L3	0.255BSC		
Θ	0	8°	

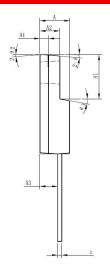






Mechanical Dimensions ITO-220AC







CVMPOL	Dimensions in millimeters			
SYMBOL	Min.	Typical	Max.	
Α	4.30	4.50	4.70	
A1	1.10	1.30	1.50	
A2	2.80	3.00	3.20	
A3	2.50	2.70	2.90	
b	0.50	0.60	0.75	
b1	1.10	1.20	1.35	
b2	1.50	1.60	1.75	
С	0.50	0.60	0.75	
D	14.80	15.00	15.20	
E	9.96	10.16	10.36	
е	-	2.55	-	
el	5.00	5.10	5.16	
H1	6.50	6.70	6.90	
L	12.70	13.20	13.70	
L1	1.60	1.80	2.00	
L2	0.80	1.00	1.20	
L3	0.60	0.80	1.00	
L4	-	1.10	1.50	
ФР1(上口)	3.30	3.50	3.70	
Φ Ρ2 (下口)	2.99	3.19	3.39	
Q	2.50	2.70	2.90	
Θ1		5°		
Θ2		4°		
Θ 3		10°		
⊝4		5°		
Θ5		5°		







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