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STB30H100C SCHOTTKY RECTIFIER

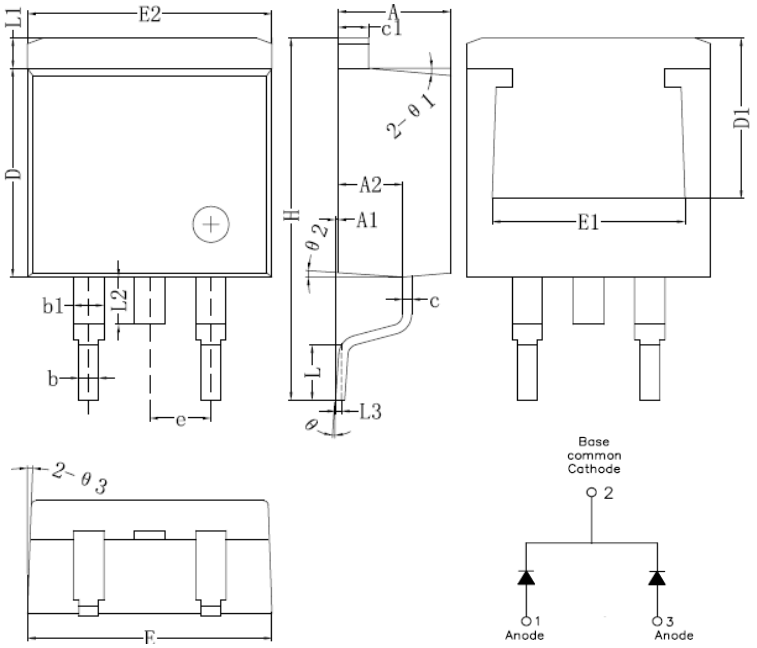
Applications:

- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**
- **Center tap configuration**

Features:

- **175°C T_J operation**
- **Center tap configuration**
- **Ultralow forward voltage drop**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Trench MOS Schottky technology**
- **This is a Pb − Free Device**
- **All SMC parts are traceable to the wafer lot**

Mechanical Dimensions: In mm



Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

D^2PAK

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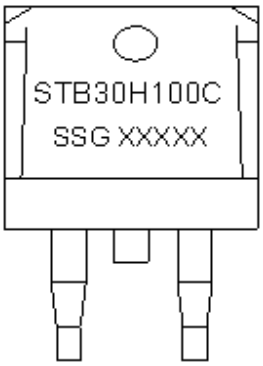
Marking Diagram:



Where XXXXX is YYWWL

ST	= Device Type
B	= Package type
30	= Forward Current (30A)
H	= Tj 175°C
100	= Reverse Voltage (100V)
C	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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

Ordering Information:

Device	Package	Shipping
STB30H100C	D^2 PAK (Pb-Free)	800pcs / reel

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

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	100	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =100°C, rectangular wave form	30	A
Peak One Cycle Non-Repetitive Surge Current(per leg)	I_{FSM}	8.3 ms, half Sine pulse	200	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg)*	V_{F1}	@ 7.5A, Pulse, T_J = 25 °C @ 15A, Pulse, T_J = 25 °C	0.54 0.76	- 0.80	V
	V_{F2}	@ 7.5A, Pulse, T_J = 125 °C @ 15A, Pulse, T_J = 125 °C	0.63 0.66	- 0.70	V
Reverse Current at DC Condition (per leg)*	I_{R1}	@V_R = rated V_R T_J = 25°C	0.005	1	mA
	I_{R2}	@V_R = rated V_R T_J = 125°C	1.6	12	mA

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	°C
Storage Temperature	T_{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case(per leg)	$R_{\theta JC}$	DC operation	2.5	°C/W
Approximate Weight	wt	-	1.85	g
Case Style	D^2PAK			

Figure1
Typical Forward Characteristics

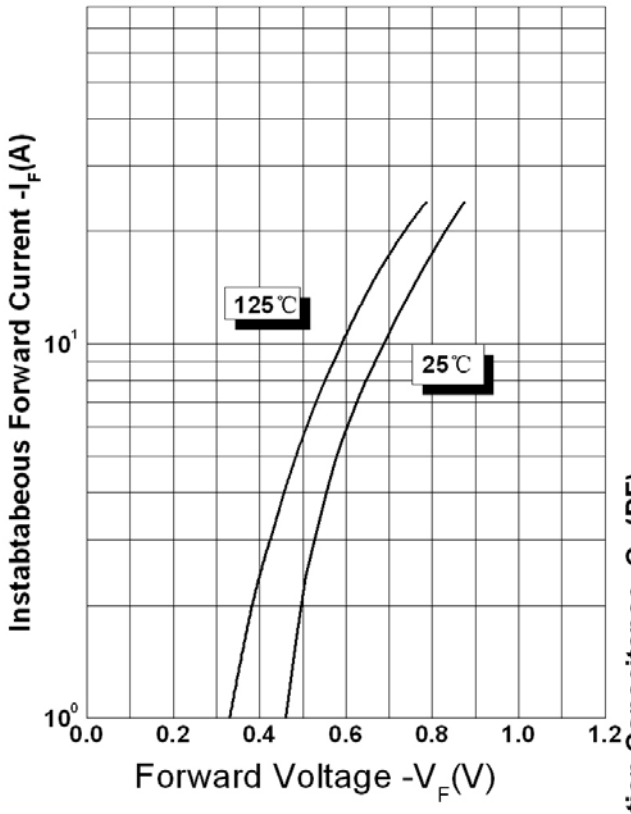


Figure 2
Typical Reverse Characteristics

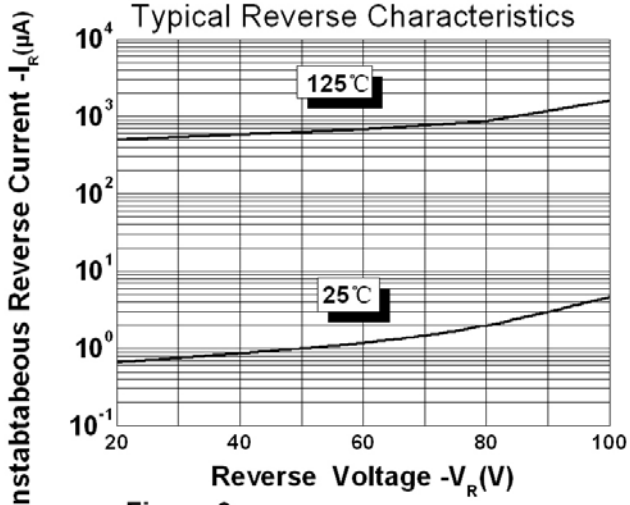
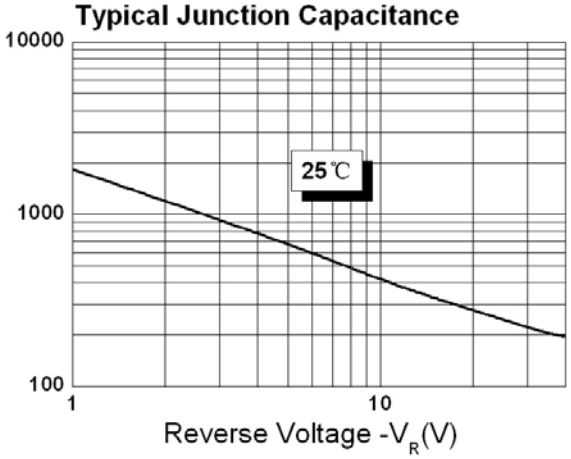


Figure 3
Typical Junction Capacitance



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