

STB40H100C SCHOTTKY RECTIFIER

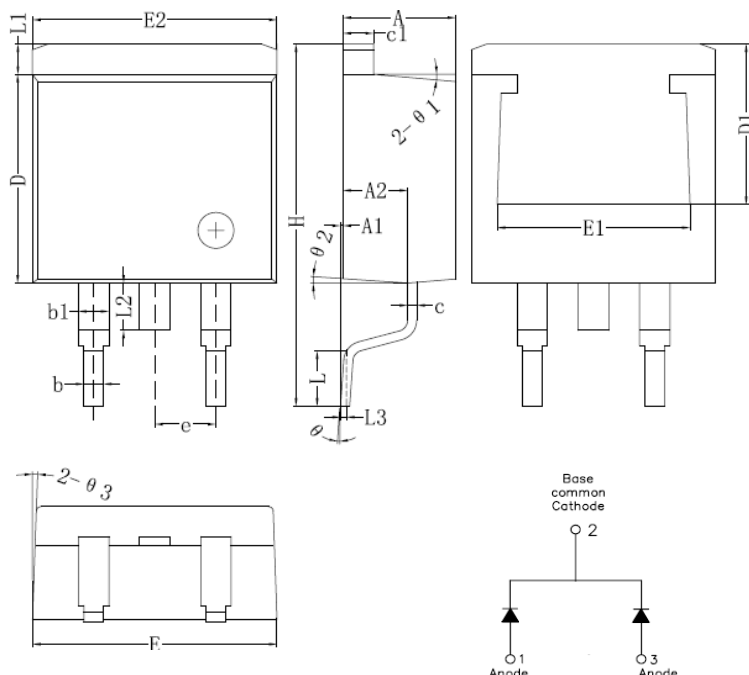
Applications:

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

Features:

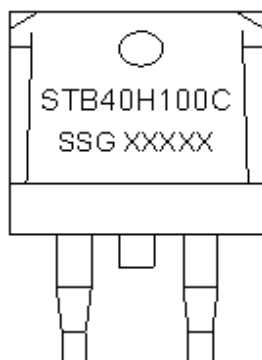
- 175°C T_J operation
- Center tap configuration
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Trench MOS Schottky technology
- This is a Pb – Free Device
- All SMC parts are traceable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

D²PAK

Marking Diagram:


Where XXXXX is YYWWL

ST	= Device Type
B	= Package type
40	= Forward Current (40A)
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
STB40H100C	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 @ $T_C = 105^\circ\text{C}$, rectangular wave form	40	A
Peak One Cycle Non-Repetitive Surge Current(per leg)	I_{FSM}	8.3 ms, half Sine pulse	300	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg)*	V_{F1}	@ 10A, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	0.65	0.70	V
		@ 20A, Pulse, $T_J = 25\text{ }^{\circ}\text{C}$	0.78	0.85	
	V_{F2}	@ 10A, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	0.55	0.60	V
		@ 20A, Pulse, $T_J = 125\text{ }^{\circ}\text{C}$	0.68	0.75	
Reverse Current at DC Condition (per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^{\circ}\text{C}$	0.006	1	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^{\circ}\text{C}$	2	15	mA

* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case(per leg)	$R_{\theta JC}$	DC operation	2.0	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	1.85	g
Case Style	D ² PAK			

Figure1
Typical Forward Characteristics

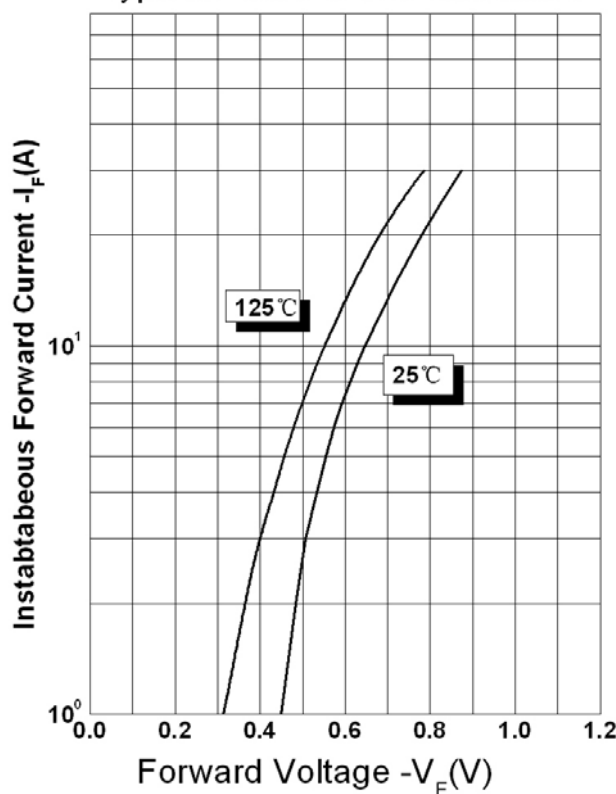


Figure 2
Typical Reverse Characteristics

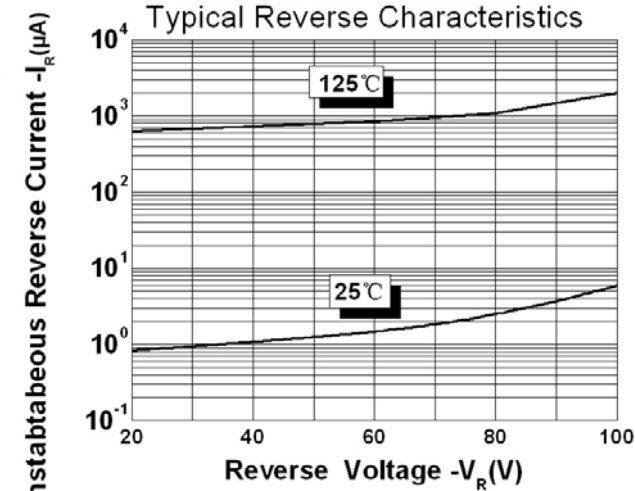
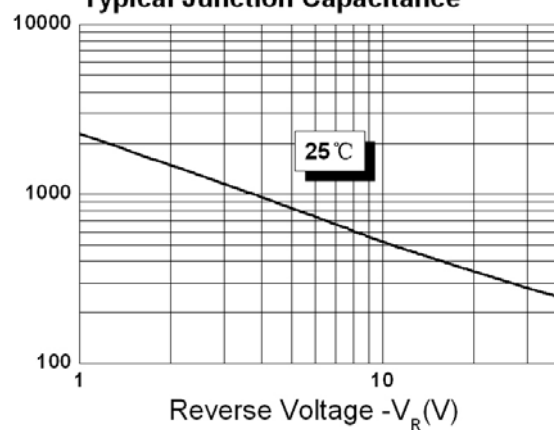


Figure 3
Typical Junction Capacitance





STB40H100C

Technical Data
Data Sheet N1835, Rev. -

Green Products

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