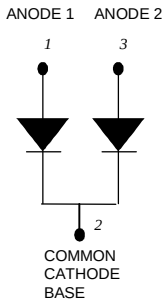
STW40100C SCHOTTKY RECTIFIER

Applications:

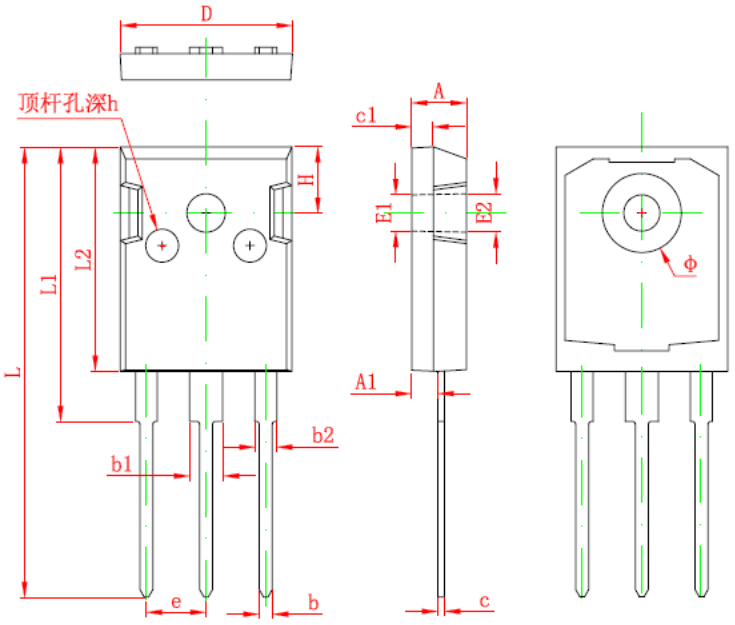
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 150 ℃ T_J operation
- Center tap TO-247AD package
- 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
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



Mechanical Dimensions: In mm / Inches



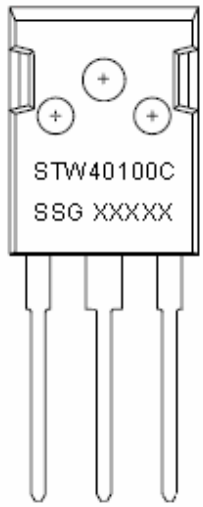
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.850	5.150	0.191	0.200
A1	2.200	2.600	0.087	0.102
b	1.000	1.400	0.039	0.055
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.900	2.100	0.075	0.083
D	15.450	15.750	0.608	0.620
E1	3.500 REF		0.138 REF	
E2	3.600 REF		0.142 REF	
L	40.900	41.300	1.610	1.626
L1	24.800	25.100	0.976	0.988
L2	20.300	20.600	0.799	0.811
Φ	7.100	7.300	0.280	0.287
e	5.450 TYP		0.215 TYP	
H	5.980 REF		0.235 REF	
h	0.000	0.300	0.000	0.012

TO-247AD

Technical Data
Data Sheet N1516, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

S = Device Type
T = Ultralow VF
W = Package type
40 = Forward Current (40A)
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
STW40100C	TO-247AD (Pb-Free)	30pcs / tube

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 Inverse Voltage	V_{RWM}	-	100	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C =105 °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}	@ 5A, Pulse, T_J = 25 °C @ 10A, Pulse, T_J = 25 °C @ 20A, Pulse, T_J = 25 °C	0.47 0.54 0.68	- - 0.75	V
	V_{F2}	@ 5A, Pulse, T_J = 125 °C @ 10A, Pulse, T_J = 125 °C @ 20A, Pulse, T_J = 125 °C	0.38 0.51 0.64	- - 0.70	V
Reverse Current at DC condition (per leg)	I_{R1}	@V_R = 70V,T_J = 25 °C @V_R = 100V,T_J = 25 °C	0.012 0.030	- 1	mA
Reverse Current (per leg) *	I_{R2}	@V_R = 70V,T_J = 125 °C @V_R = 100V,T_J = 125 °C	10 15	- 75	mA
Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	845	1000	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/µs

* Pulse Width < 300µs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	1.5	°C/W
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

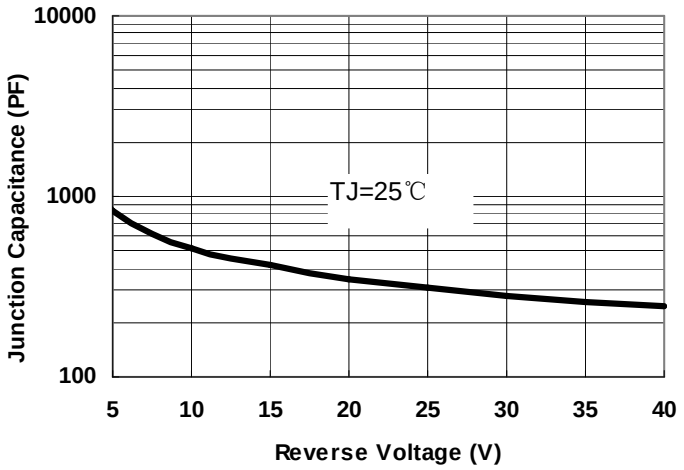


Fig.1-Typical Junction Capacitance

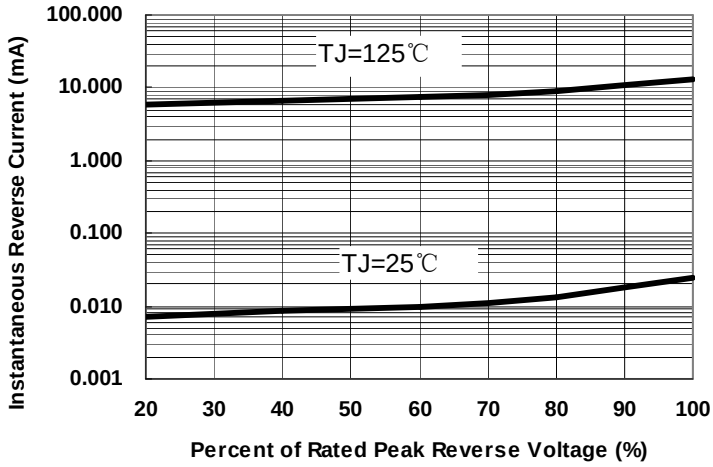


Fig.2-Typical Reverse Characteristics

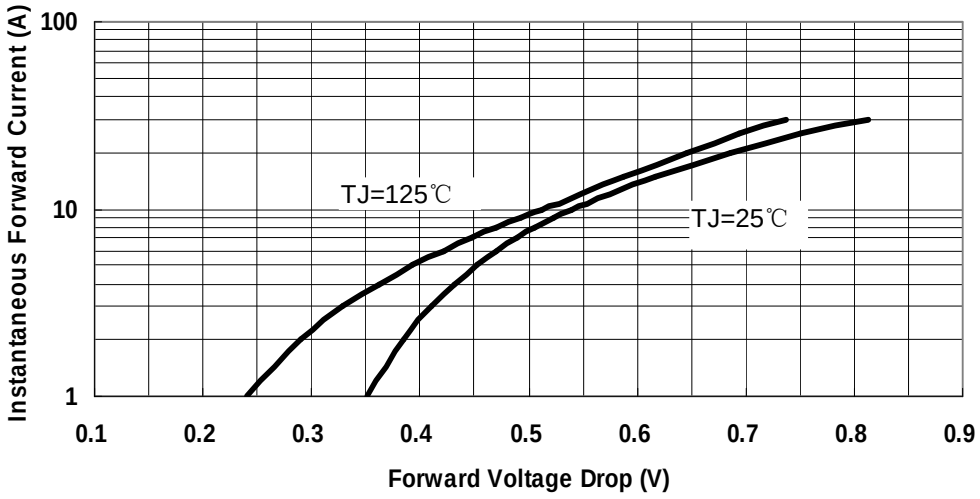


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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