

SB1840D SCHOTTKY RECTIFIER

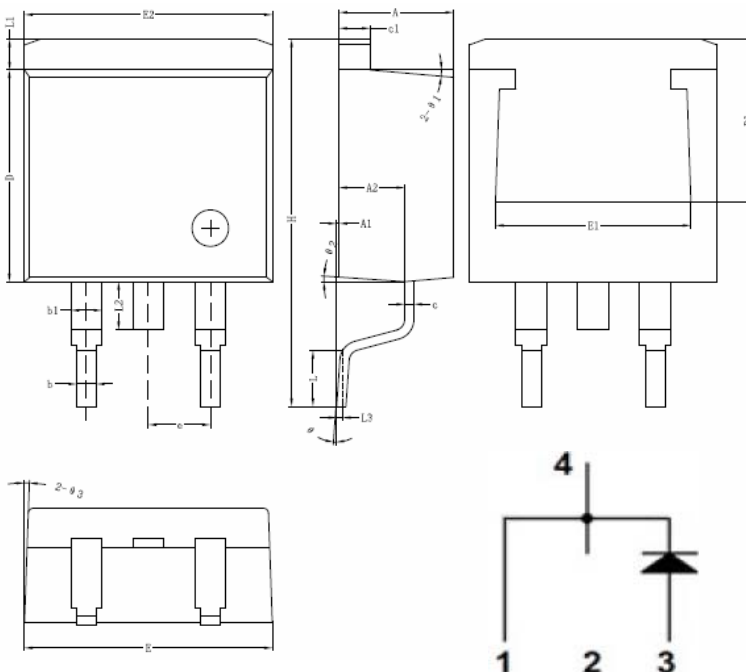
Applications:

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

Features:

- 150°C T_J operation
- Center tap configuration
- Low 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 Inches / 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°	

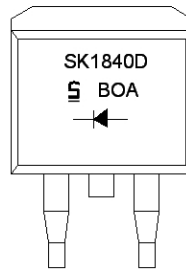
D²PAK



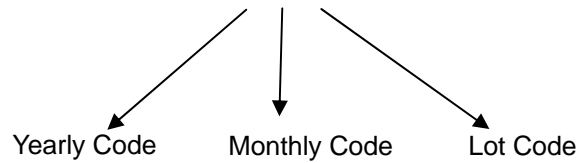
MARKING, MOLDING RESIN

First row: part number
Second row: the Semikron logo and date code
Third row: topology

For example,



Date code: "BOA"



Date Code Description

Yearly Code

Year	code	Year	code	Year	code	Year	code	Year	code	Year	code
1998	K	2003	R	2008	W	2013	D	2018	K	2023	R
1999	L	2004	S	2009	X	2014	E	2019	L	2024	S
2000	M	2005	T	2010	A	2015	F	2020	M	2025	T
2001	N	2006	U	2011	B	2016	G	2021	N	2026	U
2002	P	2007	V	2012	C	2017	H	2022	P	2027	V

Monthly Code

Month	January	February	March	April	May	June
code	1	2	3	4	5	6
Month	July	August	September	October	November	December
code	7	8	9	O	N	D

Lot Code

Lot number is from 0 to 9 and A to Z.



Technical Data
Data Sheet N0957, Rev. -

Green Products

Ordering Information:

Device	Package	Shipping
SB1840D	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 Inverse Voltage	V_{RWM}	-	40	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$, rectangular wave form	18	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	280	A

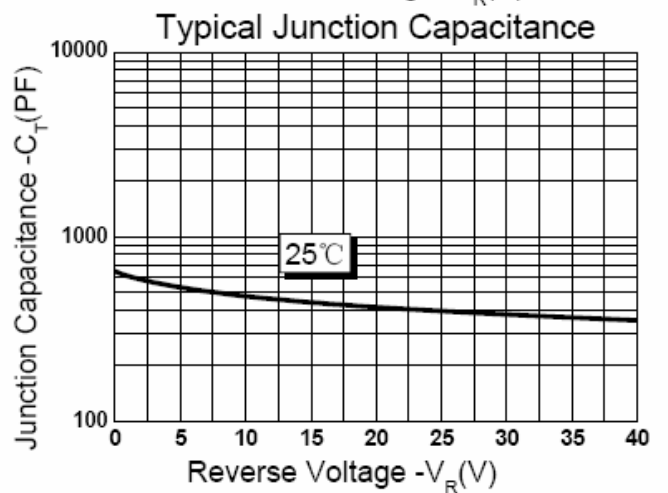
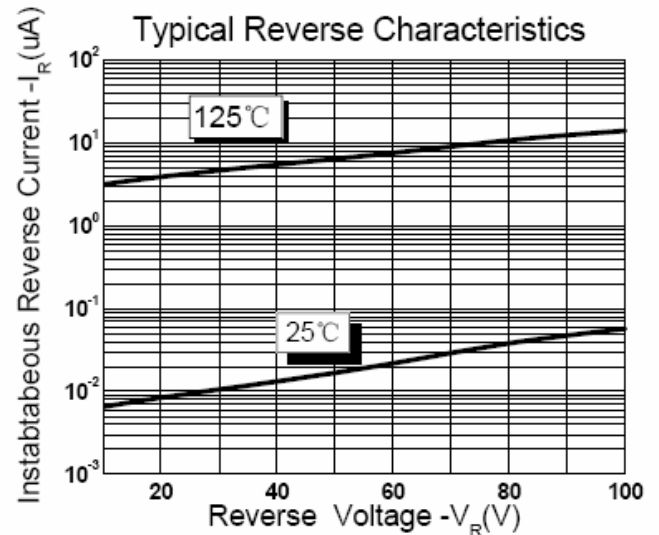
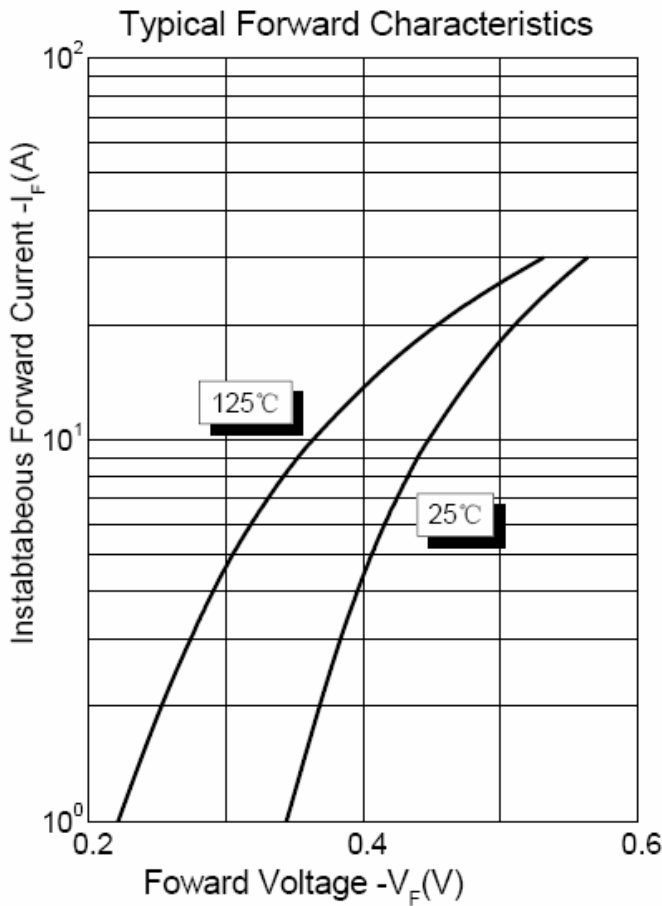
Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	V_{F1}	@5.0A, Pulse, $T_J = 25^\circ\text{C}$	0.50	V
	V_{F2}	@18A, Pulse, $T_J = 25^\circ\text{C}$	0.58	V
Max. Reverse Current at DC condition	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	500	μA
Max. Reverse Current	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	30	mA
Max. Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	800	pF
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ μs

* Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	6.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	1.85	g
Case Style	D ² PAK			





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