1N5822US

40V, 3A Schottky Diode Surface Mount

HIGH-RELIABILITY PRODUCTS

Features

- V_{RWM} = 40V
- I_R = 0.10mA
- V_F = 0.50V at I_F = 3.0A
- Hard glass Hermetically sealed
- Metallurgically bonded
- Double plug construction
- Surface mount package

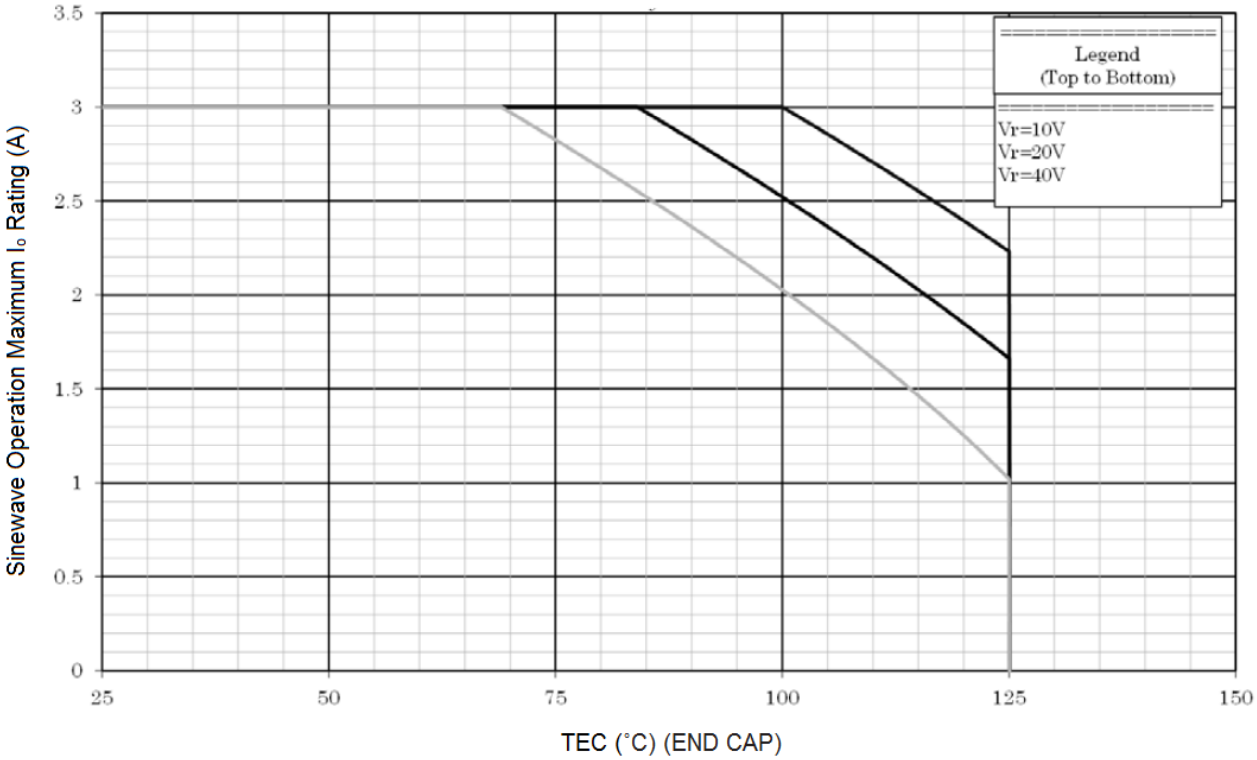
Description

1N5822US is a Schottky rectifier rated 40V, 3A in a square MELF package for surface mount applications.
Screening to equivalent of MIL-PRF-19500/620 is available.

Absolute Maximum Rating T_A = 25 ˚C unless otherwise specified.

	Symbol	1N5822US	Units
Working reverse voltage	V_{RWM}	40	V
Maximum Forward Voltage	V_{FM1} @ 1.0A V_{FM2} @ 3.0A V_{FM3} @ 9.4A	0.40 0.50 0.70	V V V
Maximum reverse leakage current	I_{RM} @ 40V	0.10	mA
Junction Temperature	T_J	-65 to +125	˚C
Storage Temperature	T_{STG}	-65 to +150	˚C
Thermal Resistance Junction to End Cap	$R_{\theta JEC}$	10	˚C/W
Surge Peak Forward current @ T_A = 25 ˚C (Test Pulse = 8.3 ms)	I_{FSM}	80	A(pk)
Thermal Impedance	$Z_{\theta JX}$	2.5	˚C/W
Average rectified output current @ T_{EC} = 25 ˚C	I_o	3	A

Temperature - Current Derating Curve

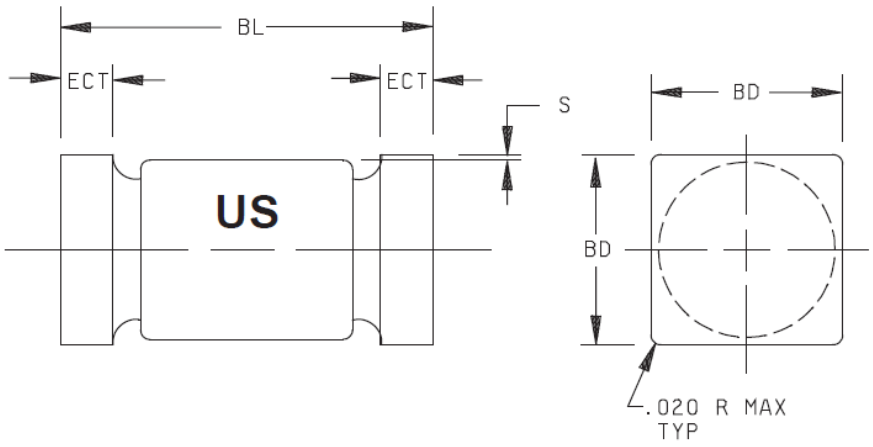


Sinewave operating 50% Duty cycle

Notes:

1. This is the true inverse of the worst case thermal resistance value. All devices are capable of operating ≤ T_J specified on this curve. Any parallel line to this curve will intersect the appropriate power for the desired maximum T_J allowed.
2. This temperature-current derating curve varies with applied voltage.

Outline Drawing



Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	.137	.148	3.48	3.76
BL	.200	.225	5.08	5.72
ECT	.019	.028	0.48	0.71
S	.003		0.08	

Notes:

1. Dimensions are in inches. Millimeters are given for information only
2. Dimensions are pre-solder dip
3. U-suffix are structurally identical to the US-suffix parts
4. In accordance with ASME Y14.5M, diameters are equivalent to ϕ_X symbology
5. Terminal Finish 63/37 solder

Important Notice

Information relating to this product and the application or design described herein is believed to be reliable, however such information is provided as a guide only and Semtech assumes no liability for any errors in this document, or for the application or design described herein. Semtech reserves the right to make changes to the product or this document at any time without notice. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. Semtech warrants performance of its products to the specifications applicable at the time of sale, and all sales are made in accordance with Semtech's standard terms and conditions of sale.

SEMTECH PRODUCTS ARE NOT DESIGNED, INTENDED, AUTHORIZED OR WARRANTED TO BE SUITABLE FOR USE IN LIFE-SUPPORT APPLICATIONS, DEVICES OR SYSTEMS, OR IN NUCLEAR APPLICATIONS IN WHICH THE FAILURE COULD BE REASONABLY EXPECTED TO RESULT IN PERSONAL INJURY, LOSS OF LIFE OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. INCLUSION OF SEMTECH PRODUCTS IN SUCH APPLICATIONS IS UNDERSTOOD TO BE UNDERTAKEN SOLELY AT THE CUSTOMER'S OWN RISK. Should a customer purchase or use Semtech products for any such unauthorized application, the customer shall indemnify and hold Semtech and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs damages and attorney fees which could arise.

Contact Information

Semtech Corporation
High-Reliability Products
200 Flynn Road, Camarillo, CA 93012
Phone: (805) 498-2111, Fax: (805) 498-3804

For general inquiries, sales and technical supports:
www.semtech.com/contact