

Main Product Characteristics

$I_{F(AV)}$	1A
V_{RRM}	40V
T_J	150°C
$V_{F(Typ)}$	0.280V

Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Lead free in compliance with EU RoHS.

Mechanical data

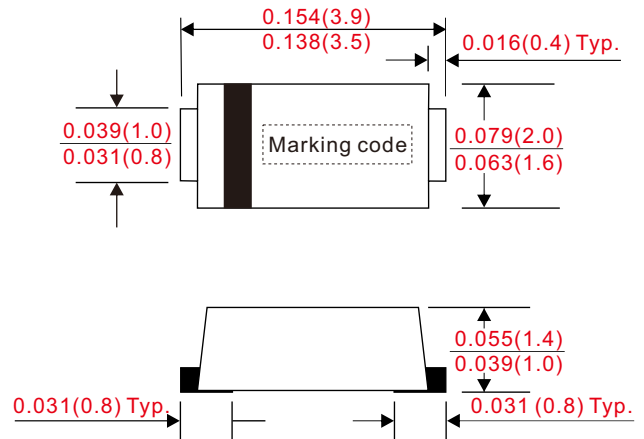
- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123S
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : Approximated 0.018 gram

Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Outline

SOD-123S



Dimensions in inches and (millimeters)

Circuit Diagram



Parameter	Conditions	Symbol	CB140WG-S	UNIT
Working peak reverse voltage		V_{RWM}	40	V
Forward rectified current		I_O	1	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	30	A
Peak repetitive reverse surge current	2us - 1kHz	I_{RRM}	1	A
Typical Thermal resistance	Junction to case	R_{BJC}	35	°C/W
	Junction to ambient	R_{BJA}	160	
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating Junction temperature		T_J	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 1A, T_J = 25^\circ C$	V_F		390	450	mV
	$I_F = 1A, T_J = 125^\circ C$			280		
Reverse current	$V_R = 40V, T_J = 25^\circ C$	I_R		0.02	0.1	mA
	$V_R = 40V, T_J = 125^\circ C$			7	30	
Reverse Breakdown Voltage	$I_R = 0.5mA, T_J = 25^\circ C$	V_{BR}	40			V

Rating and characteristic curves

Fig. 1 - Forward Characteristics

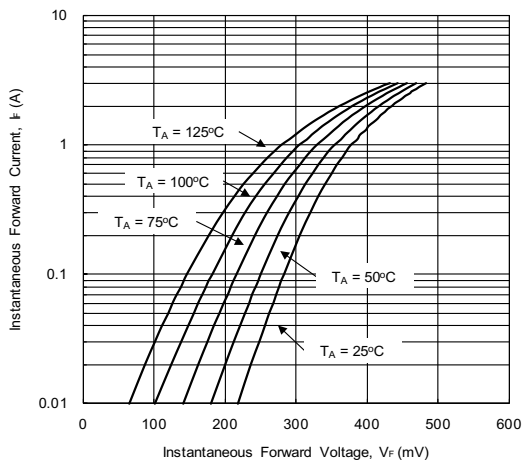


Fig. 2 - Reverse Characteristics

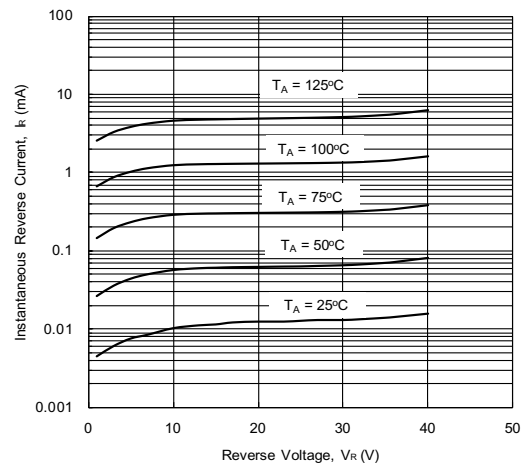


Fig. 3 - Forward Power Dissipation

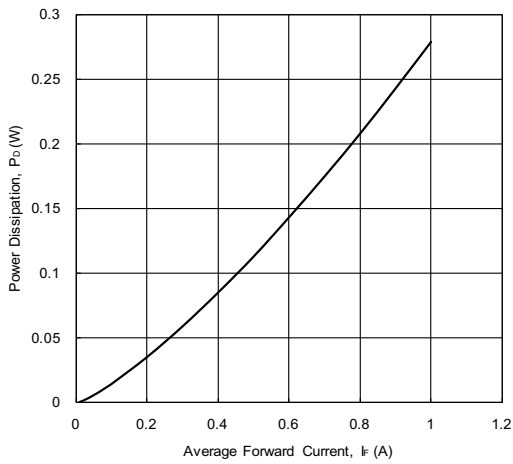


Fig. 4 - Forward Current Derating Curve

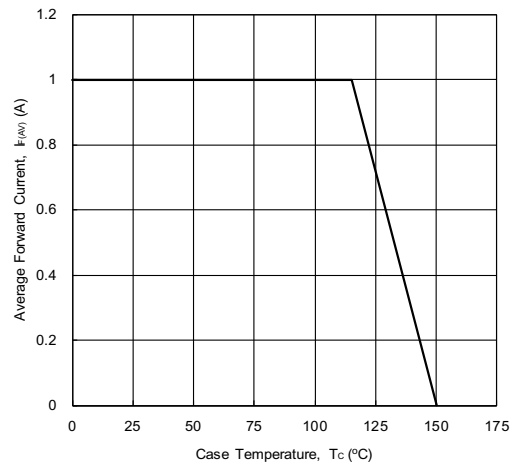
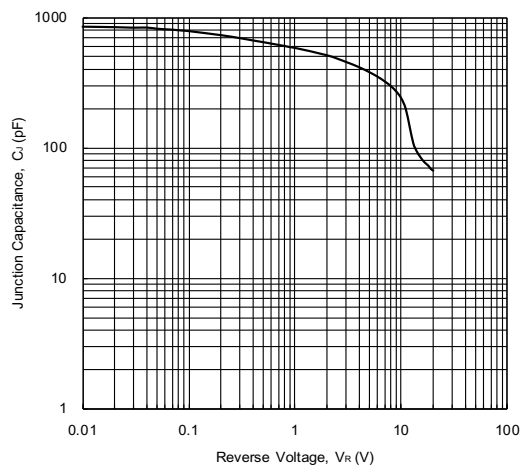
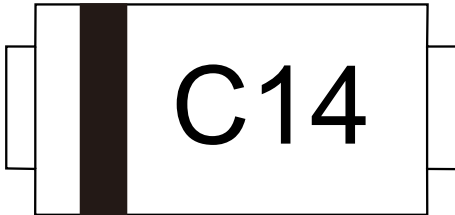


Fig. 5 - Junction Capacitance



■ Marking Information

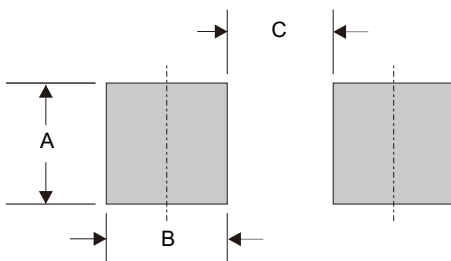


■ Ordering/Packing information

	Part number	Case	Q'TY/Reel (PCS)	Q'TY/Box (PCS)	Q'TY/Carton (PCS)
Halogen free	CB140WG-S	SOD-123S	3,000	30,000	240,000

Notes : 1. For packaging details please reference our website at <http://www.citcorp.com.tw/tchinese/products/index.php>

■ SOD-123S foot print



A	B	C
0.044 (1.10)	0.039 (1.00)	0.079 (2.00)

Dimensions in inches and (millimeters)

- CITC reserves the right to make changes to this document and its products and specifications at any time without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- CITC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CITC assume any liability for application assistance or customer product design.
- CITC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of CITC.
- CITC products are not authorized for use as critical components in life support devices or systems without express written approval of CITC.