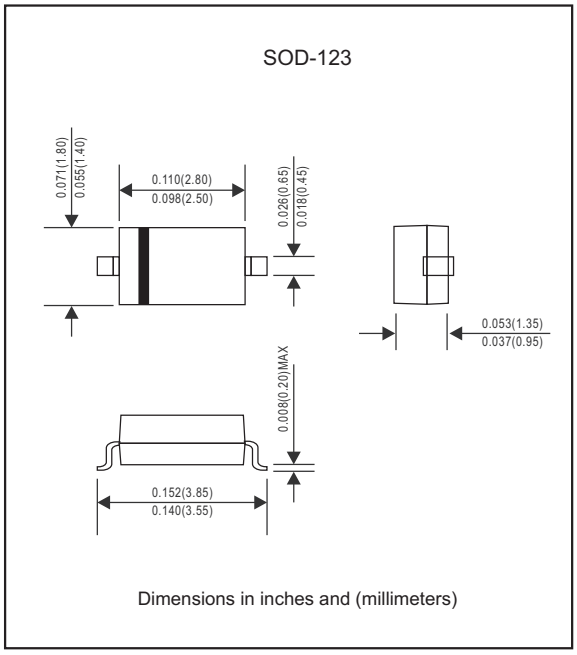
BAV19W-Q1 THRU BAV21W-Q1

200mA Surface Mount Switching Diode-120V-250V

Features

- Fast speed switching.
- For general purpose switching application.
- High conductance.
- Silicon epitaxial planar chip
- Lead-free parts meet RoHS requirments.
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Package outline



Mechanical data

- Epoxy:UL94-VO rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	BAV19W-Q1	BAV20W-Q1	BAV21W-Q1	UNIT
Non-repetitive peak reverse voltage		V_{RM}	120	200	250	V
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_R	100	150	200	V
Forward Continous Current (1)		I_{FM}	400			mA
Average rectified output current(1)		I_O	200			mA
Non-repetitive peak forward surge current	@t = 1.0 ms @t = 1.0 s	I_{FSM}	2.5 0.5			A
Power dissipation		P_D	250			mW
Typical Thermal resistance	Junction to ambient air(1)	$R_{\theta JA}$	500			°C/W
Operating temperature		T_J	-55 ~ +150			°C
Storage temperature		T_{STG}	-65 ~ +150			°C
Maximum Forward voltage	I_F = 100 mA I_F = 200 mA	V_F	1.0 1.25			V
Maximum Reverse leakage	@rated DC blocking voltage, T_J=25°C T_J=100°C	I_R	100 15			nA uA
Maximum Total capacitance	V_R = 1.0 V , f = 1.0MHz	C_J	5.0			pF
Maximum Reverse recovery time	I_F = I_R = 30mA , I_{RR} = 0.1 X I_R , R_L = 100$_{OHM}$	t_{rr}	50			ns

Note 1. Valid provided that electrodes are kept at ambient temperature.

Rating and characteristic curves(BAV19W-Q1 THRU BAV21W-Q1)

FIG.1-POWER DERATING CURVE

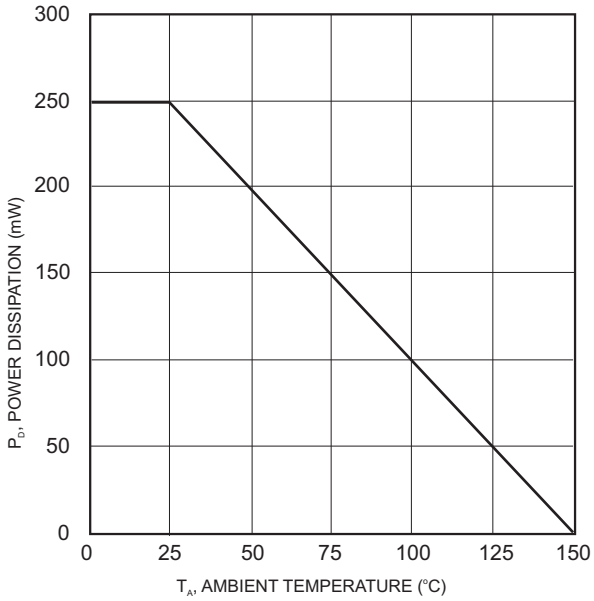


FIG.2-TYPICAL CAPACITANCE VS. REVERSE VOLTAGE

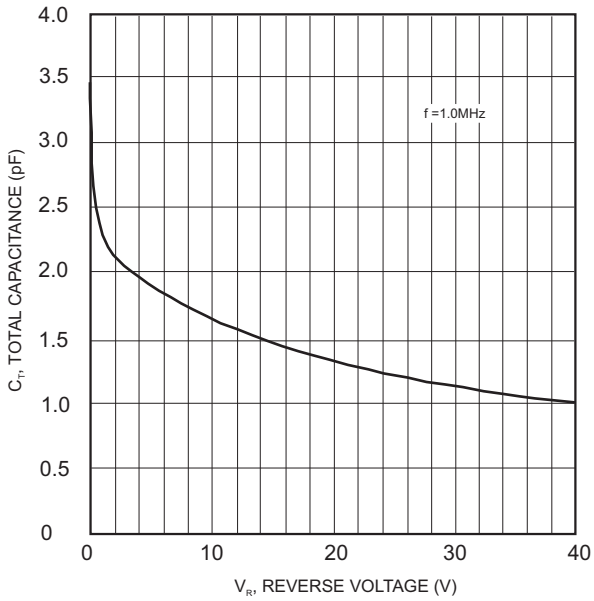


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

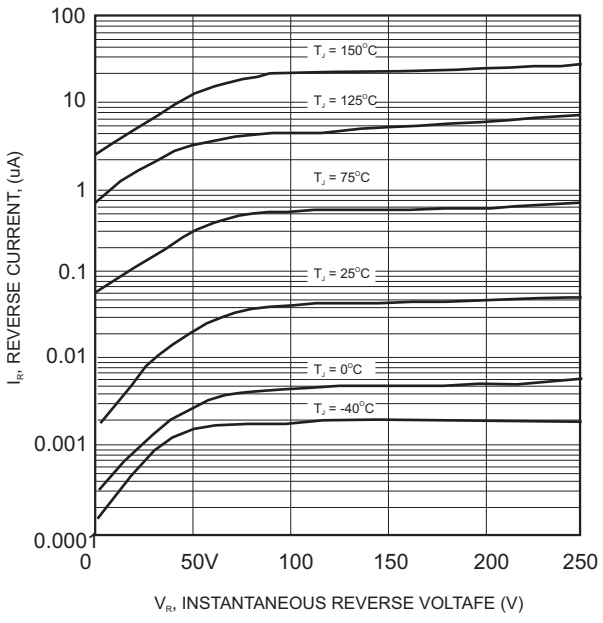
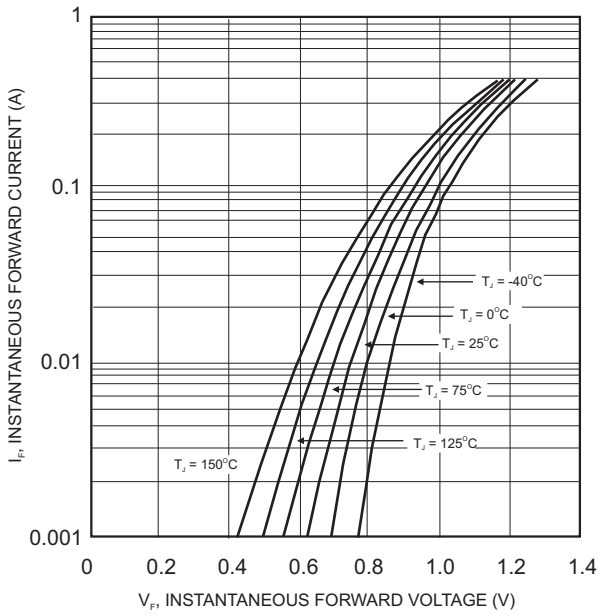


FIG.4-TYPICAL FORWARD CHARACTERISTICS



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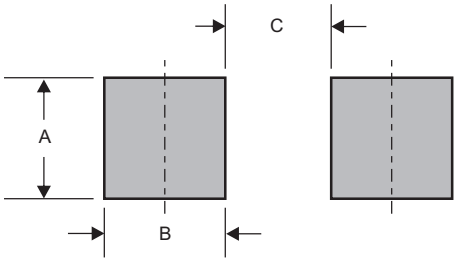
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
BAV19W-Q1	A8
BAV20W-Q1	T2
BAV21W-Q1	T3

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.059 (1.50)	0.059 (1.50)	0.094 (2.40)