Diotec Semiconductor

BAS16W, BAW56W, BAV70W, BAV99W, BAV199W

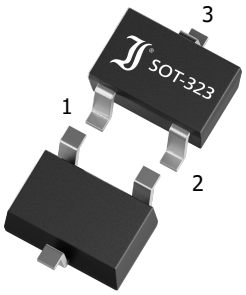
SMD Small Signal Diodes
SMD Kleinsignal-Dioden

I_{FAV} = 150 mA
V_{F1} < 0.715 V
T_{jmax} = 150°C

V_{RRM} = 85 V
I_{FSM1} = 2 A
t_{rr} < 4 ns

Version 2021-07-01

SOT-323



SPICE Model & **STEP** File [1])

Marking Code
See below'XX' | Siehe unten 'XX'

HS Code 85411000

Typical Applications
Signal processing, High-speed Switching, Rectifying
Commercial grade
Suffix -Q: AEC-Q101 compliant [1])
Suffix -AQ: in AEC-Q101 qualification [1])

Typische Anwendungen
Signalverarbeitung, Schnelles Schalten, Gleichrichten
Standardausführung
Suffix -Q: AEC-Q101 konform [1])
Suffix -AQ: in AEC-Q101 Qualifikation [1])

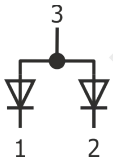
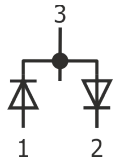
Features
Very high switching speed
Low junction capacitance
Low leakage current
Compliant to RoHS (w/o exemp.)
REACH, Conflict Minerals [1])

Besonderheiten
Extrem schnelles Schalten
Niedrige Sperrschichtkapazität
Niedriger Sperrstrom
Konform zu RoHS (ohne Ausn.)
REACH, Konfliktmineralien [1])

Mechanical Data [1])

Taped and reeled	3000 / 7"	Gegurtet auf Rolle
Weight approx.	0.01 g	Gewicht ca.
Case material	UL 94V-0	Gehäusematerial
Solder & assembly conditions	260°C/10s MSL = 1	Löt- und Einbaubedingungen

Mechanische Daten [1])

BAS16W 'A6'		Single Diode
BAV70W/-AQ 'PH'		Common Cathode
BAW56W 'YX'		Common Anode
BAV99W 'A7' **BAV199W/-AQ** 'JY'		Series Connection

Maximum ratings [1]) **Grenzwerte [2])**

Power dissipation (per device) – Verlustleistung (pro Bauteil)		P_{tot}	200 mW [2])
Maximum forward current, single diode loaded Dauergrenzstrom, eine Diode belastet	BAS16W, BAW56W, BAV99W BAV199W/-AQ BAV70W/-AQ	I_{FAV}	150 mA [3]) 160 mA [3]) 175 mA [3])
Maximum forward current, both diodes loaded Dauergrenzstrom, beide Dioden belastet	BAV199W/-AQ BAW56W, BAV99W BAV70W/-AQ	I_{FAV}	140 mA [3]) 125 mA [3]) 100 mA [3])
Repetitive peak forward current – Periodischer Spitzenstrom		I_{FRM}	300 mA [3])
Non repetitive peak forward surge current Stoßstrom-Grenzwert	$t_p \le 1$ s $t_p \le 1$ ms $t_p \le 1$ µs	I_{FSM}	0.5 A 1 A 2 A

1 Please note the detailed information on our website or at the beginning of the data book
Bitte beachten Sie die detaillierten Hinweise auf unserer Internetseite bzw. am Anfang des Datenbuches
1 T_A = 25°C and per diode, unless otherwise specified – T_A = 25°C und pro Diode, wenn nicht anders angegeben
2 Mounted on 3 mm² copper pads per terminal – Montage auf 3 mm² Kupferbelag (Lötpads) je Anschluss

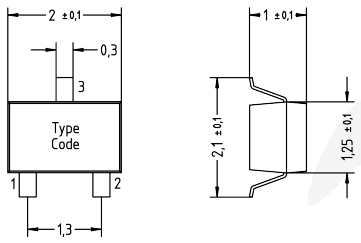
Maximum ratings [1]) **Grenzwerte [2])**

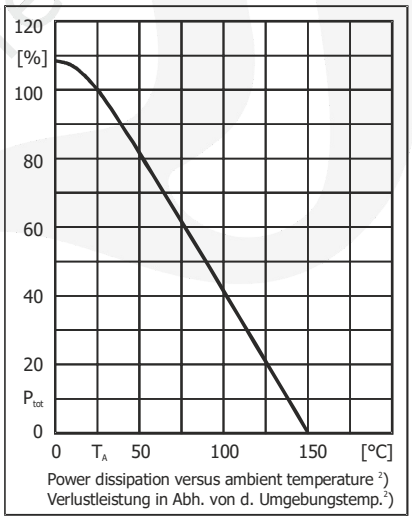
Repetitive peak reverse voltage Periodische Spitzensperrspannung		BAS16W, BAW56W, BAV99W, BAV199W/-AQ BAV70W/-AQ	V_{RRM}	85 V 100 V
Reverse voltage Sperrspannung	DC	BAS16W, BAW56W, BAV99W, BAV70W/-AQ BAV199W/-AQ	V_R	75 V 85 V
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur			T_j T_S	-55...+150°C

Characteristics **Kennwerte**

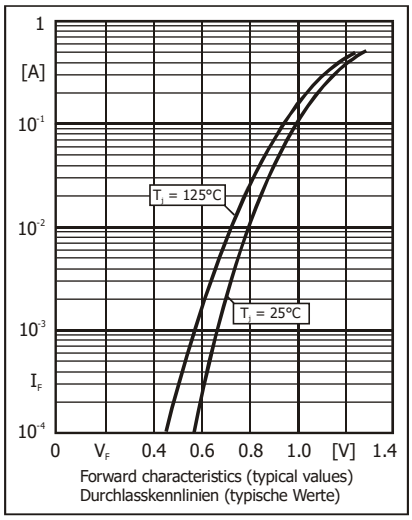
				BAS16W BAW56W BAV99W	BAV70W	BAV199W/-AQ
Forward voltage Durchlass-Spannung [2])	T_j = 25°C	I_F = 1 mA 10 mA 50 mA 150 mA	V_F	< 715 mV < 855 mV < 1.0 V < 1.25 V	< 715 mV < 855 mV < 1.0 V < 1.25 V	< 900 mV < 1.0 V < 1.1 V < 1.25 V
Leakage current Sperrstrom [1])	T_j = 25°C	V_R = 25 V 75 V	I_R	< 30 nA < 1.0 µA	< 30 nA < 2.5 µA	– < 5 nA
	T_j = 150°C	V_R = 25 V 75 V	I_R	< 30 µA < 50 µA	< 30 µA < 50 µA	– < 80 nA
Junction capacitance Sperrschichtkapazität	V_R = 0 V, f = 1 MHz		C_T	< 2 pF		typ 2 pF
Reverse recovery time Sperrverzug	I_F = 10 mA über/through I_R = 10 mA bis/to I_R = 1 mA		t_{rr}	< 4 ns		< 3000 ns
Typical thermal resistance junction to ambient Typischer Wärmewiderstand Sperrschicht-Umgebung			R_{thA}	400 K/W [3])		

Dimensions – Maße [mm]





Power dissipation versus ambient temperature [2])
Verlustleistung in Abh. von d. Umgebungstemp.[2])



Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)

1 T_A = 25°C and per diode, unless otherwise specified – T_A = 25°C und pro Diode, wenn nicht anders angegeben
2 Tested with pulses t_p = 300 µs, duty cycle ≤ 2%
Gemessen mit Impulsen t_p = 300 µs, Schaltverhältnis ≤ 2%
3 Mounted on 3 mm² copper pads per terminal
Montage auf 3 mm² Kupferbelag (Lötpads) je Anschluss

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Diotec Semiconductor:

BAV70W-AQ BAW56W BAV199W BAS16W BAV199W-AQ BAV99W BAV70W