

BAT42-TAP Datasheet



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DiGi Electronics Part Number	BAT42-TAP-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	BAT42-TAP
Description	DIODE SCHOTTKY 30V 200MA DO35
Detailed Description	Diode 30 V 200mA Through Hole DO-204AH (DO-35)

This model BAT42-TAP is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

BAT42-TAP

Series:

-

Technology:

Schottky

Current - Average Rectified (Io):

200mA

Speed:

Small Signal \leq 200mA (Io), Any Speed

Current - Reverse Leakage @ Vr:

500 nA @ 25 V

Grade:

Automotive

Mounting Type:

Through Hole

Supplier Device Package:

DO-204AH (DO-35)

Base Product Number:

BAT42

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

30 V

Voltage - Forward (Vf) (Max) @ If:

650 mV @ 50 mA

Reverse Recovery Time (trr):

5 ns

Capacitance @ Vr, F:

7pF @ 1V, 1MHz

Qualification:

AEC-Q101

Package / Case:

DO-204AH, DO-35, Axial

Operating Temperature - Junction:

125°C (Max)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0070

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



Small Signal Schottky Diode



FEATURES

- For general purpose applications
- These diodes feature very low turn-on voltage and fast guard ring against excessive voltage, such as electrostatic discharges
- These diodes are also available in the SOD-123 case with the type designations BAT42W-V to BAT43W-V and in MiniMELF SOD-80 case with the type designations LL42 to LL43
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

LINKS TO ADDITIONAL RESOURCES



3D Models



Marking



Parametric Search



Order Samples

MECHANICAL DATA

Case: DO-35 (DO-204AH)

Weight: approx. 125 mg

Cathode band color: black

Packaging codes/options:

TR/10K per 14" reel (52 mm tape), 50K/box

TAP/10K per ammo tape (52 mm tape), 50K/box

PARTS TABLE

PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAT42	BAT42-TR or BAT42-TAP	Single	BAT42	Tape and reel/ammopack
BAT43	BAT43-TR or BAT43-TAP	Single	BAT43	Tape and reel/ammopack

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRM}	30	V
Forward continuous current ⁽¹⁾		I_F	200	mA
Repetitive peak forward current ⁽¹⁾	$t_p < 1\text{ s}, \delta < 0.5$	I_{FRM}	500	mA
Surge forward current ⁽¹⁾	$t_p < 10\text{ ms}$	I_{FSM}	4	A
Power dissipation ⁽¹⁾	$T_{amb} = 65\text{ }^{\circ}\text{C}$	P_{tot}	200	mW

Note

⁽¹⁾ Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature

THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air ⁽¹⁾		R_{thJA}	300	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Ambient operating temperature range		T_{amb}	-65 to +125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65 to +150	$^{\circ}\text{C}$

Note

⁽¹⁾ Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature



ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100\text{ }\mu\text{A}$ (pulsed)		$V_{(BR)}$	30			V
Leakage current ⁽¹⁾	$V_R = 25\text{ V}$		I_R			0.5	μA
	$V_R = 25\text{ V}, T_j = 100\text{ }^{\circ}\text{C}$		I_R			100	μA
Forward voltage ⁽¹⁾	$I_F = 200\text{ mA}$		V_F			1000	mV
	$I_F = 10\text{ mA}$	BAT42	V_F			400	mV
	$I_F = 50\text{ mA}$	BAT42	V_F			650	mV
	$I_F = 2\text{ mA}$	BAT43	V_F	260		330	mV
	$I_F = 15\text{ mA}$	BAT43	V_F			450	mV
Diode capacitance	$V_R = 1\text{ V}, f = 1\text{ MHz}$		C_D		7		pF
Reverse recovery time	$I_F = 10\text{ mA}, I_R = 10\text{ mA}, i_R = 1\text{ mA}, R_L = 100\text{ }\Omega$		t_{rr}			5	ns
Rectification efficiency	$R_L = 15\text{ k}\Omega, C_L = 300\text{ pF}, f = 45\text{ MHz}, V_{RF} = 2\text{ V}$		η_v	80			%

Note

⁽¹⁾ Pulse test; $t_p < 300\text{ }\mu\text{s}$, $t_p/T < 0.02$

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

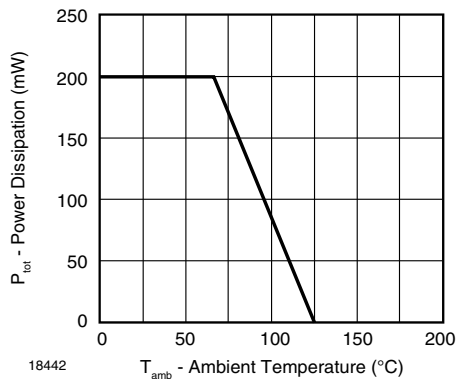


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

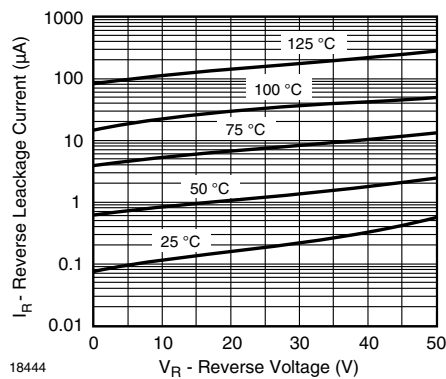


Fig. 3 - Typical Reverse Characteristics

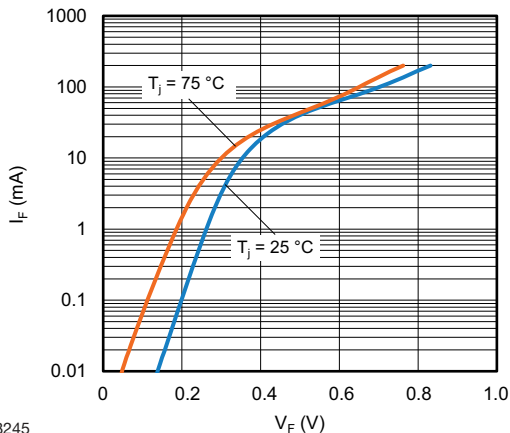


Fig. 2 - Typical Reverse Characteristics

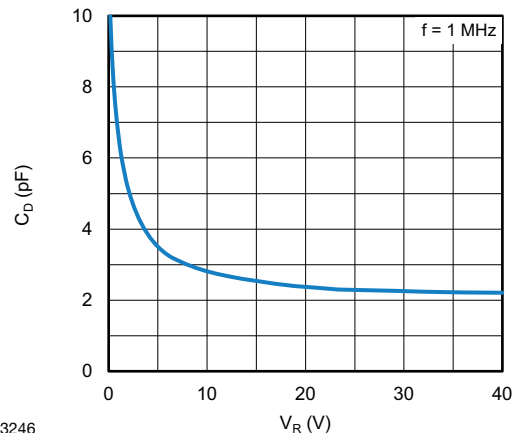


Fig. 4 - Typical Capacitance vs. Reverse Voltage

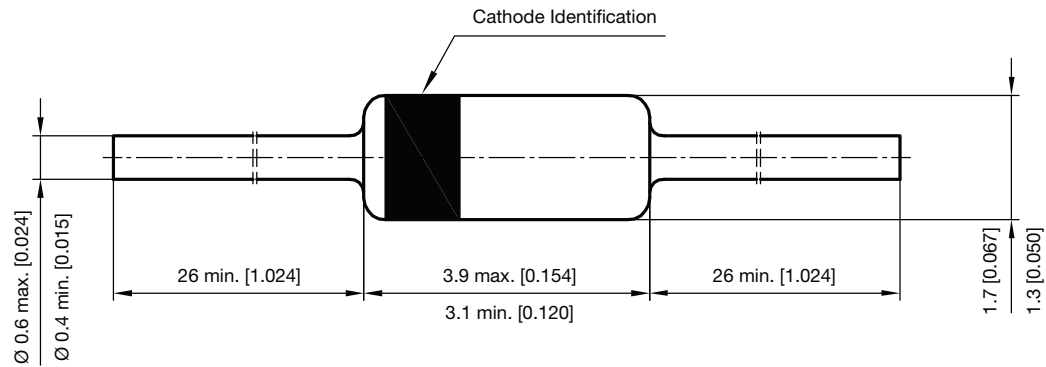


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BAT42, BAT43

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PACKAGE DIMENSIONS in millimeters (inches): **DO-35 (DO-204AH)**



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 94 9366



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