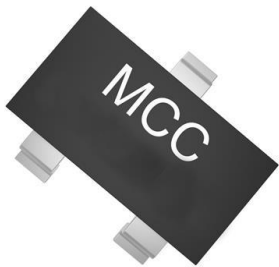


BAS16-TP Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	BAS16-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	BAS16-TP
Description	DIODE GEN PURP 100V 300MA SOT23
Detailed Description	Diode 100 V 300mA Surface Mount SOT-23

This model BAS16-TP is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

BAS16-TP

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

300mA

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

1 μ A @ 75 V

Mounting Type:

Surface Mount

Supplier Device Package:

SOT-23

Base Product Number:

BAS16

Manufacturer:

Micro Commercial Co

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

100 V

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

1.25 V @ 100 mA

Reverse Recovery Time (trr):

4 ns

Capacitance @ Vr, F:

2pF @ 0V, 1MHz

Package / Case:

TO-236-3, SC-59, SOT-23-3

Operating Temperature - Junction:

-55°C ~ 150°C

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0070

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

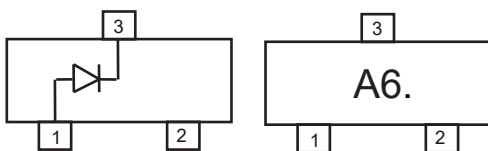
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance(Note2): 357°C/W Junction to Ambient

MCC Part Number	Repetitive Peak Reverse Voltage V_{RRM}	RMS Reverse Voltage $V_{R(RMS)}$	Reverse Voltage V_R
BAS16	100V	70V	100V

Parameter	Symbol	Value
Peak Reverse Voltage	V_{RM}	100V
Working Peak Reverse Voltage	V_{RWM}	100V
Peak Forward Current	I_F	215mA
Peak Forward Surge Current (t=1s) (t=0.1ms)	I_{FSM}	1A 4A
Power Dissipation	P_D	350mW

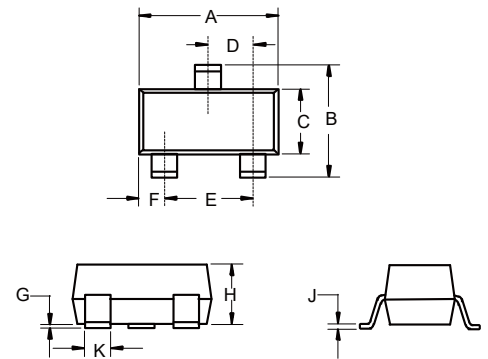
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 2. Part mounted on FR-4 board with recommended pad layout.

Internal Structure and Marking Code



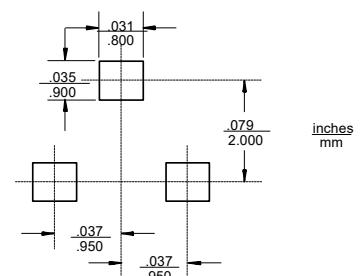
350mW 100Volt Switching Diode

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.035	0.041	0.89	1.03	
E	0.070	0.081	1.78	2.05	
F	0.018	0.024	0.45	0.60	
G	0.0005	0.0039	0.01	0.10	
H	0.035	0.044	0.89	1.12	
J	0.003	0.007	0.085	0.180	
K	0.015	0.020	0.37	0.51	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Breakdown Voltage	V_{BR}	$I_R=100\mu A$	100			V
Maximum Instantaneous Forward Voltage	V_F	$I_{FM}=1mA$			0.715	V
		$I_{FM}=10mA$			0.855	V
		$I_{FM}=50mA$			1	V
		$I_{FM}=100mA$			1.25	V
Maximum DC Reverse Current	I_R	$V_R=75V, T_J=25^\circ C$			1	μA
		$V_R=75V, T_J=150^\circ C$			50	μA
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		2		pF
Reverse Recovery Time	t_{rr}	$I_F=10mA,$ $V_R= 6.0V, R_L=100\Omega$			4	ns

* Pulse Test: Pulse Width 300 μ sec, Duty Cycle 2%

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

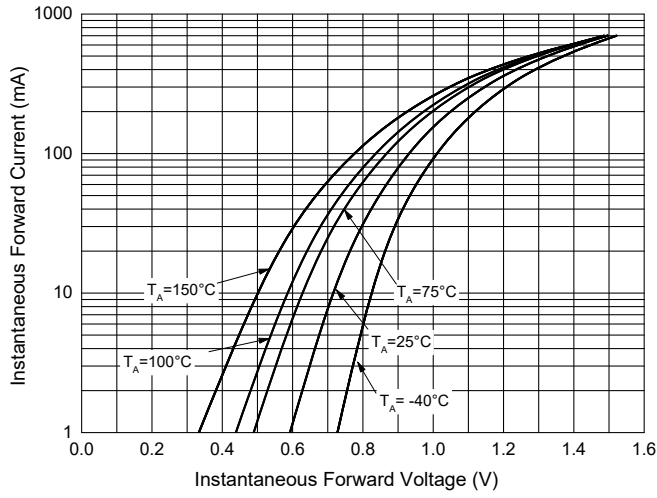


Fig. 2 - Typical Reverse Leakage Characteristics

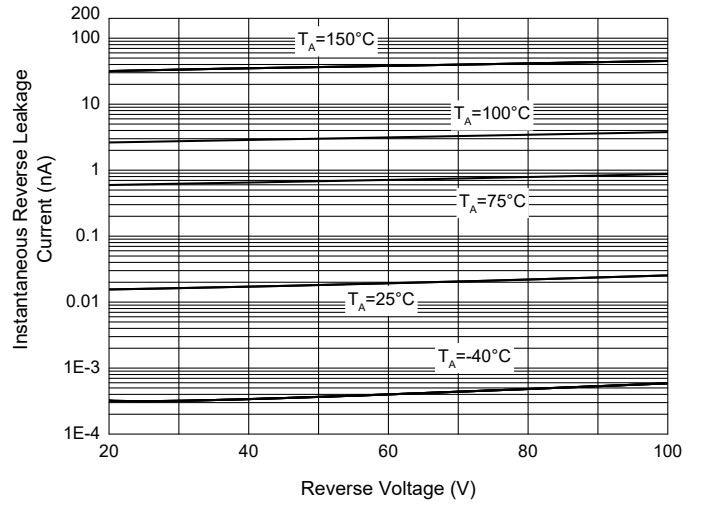


Fig. 3 - Capacitance Characteristics

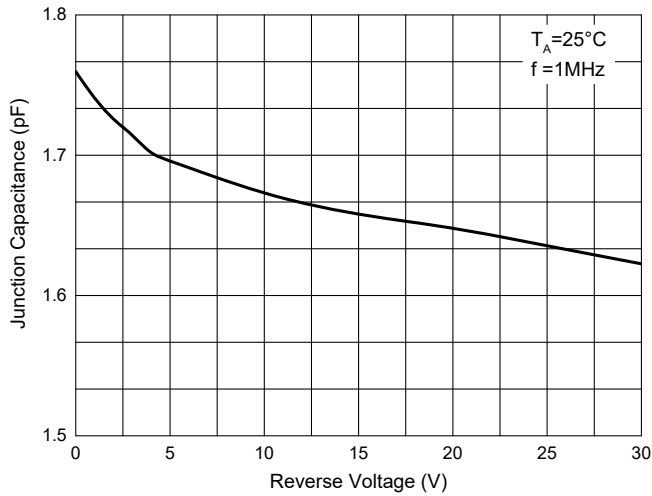
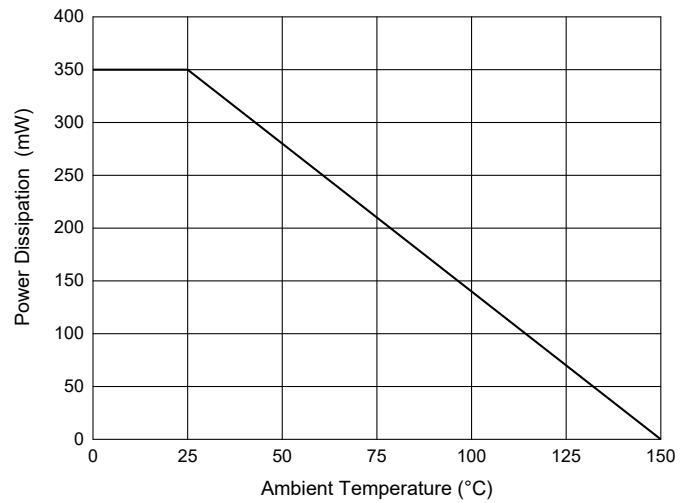


Fig. 4 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel
Part Number-13P	Tape&Reel: 10Kpcs/Reel

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