

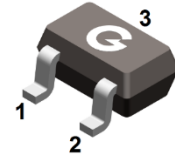
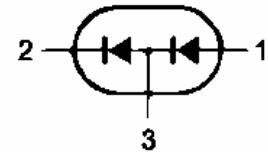
Features

- Low diode capacitance
- Low diode forward resistance
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF

Mechanical Data

- Case: SOT-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBAP50-04W	SOT-323	3000 pcs / Tape & Reel	4LP

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V _R	50	V
Forward Current	I _F	50	mA

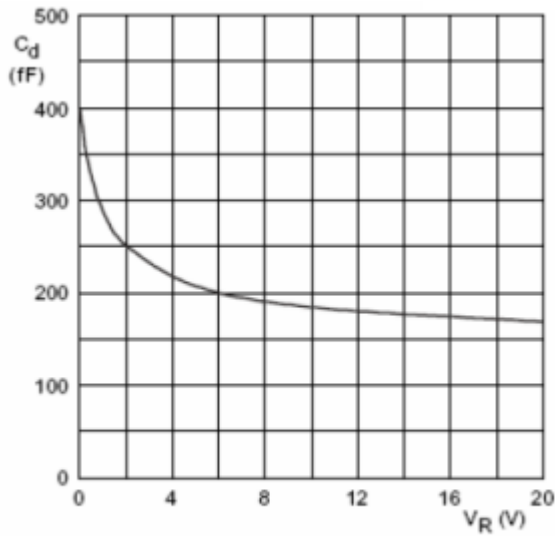
Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation(T _{sp} = 90 °C)	P _D	200	mW
Operating Junction Temperature Range	T _J	-65 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

Electrical Characteristics (@ $T_J = 25^{\circ}\text{C}$ unless otherwise specified)

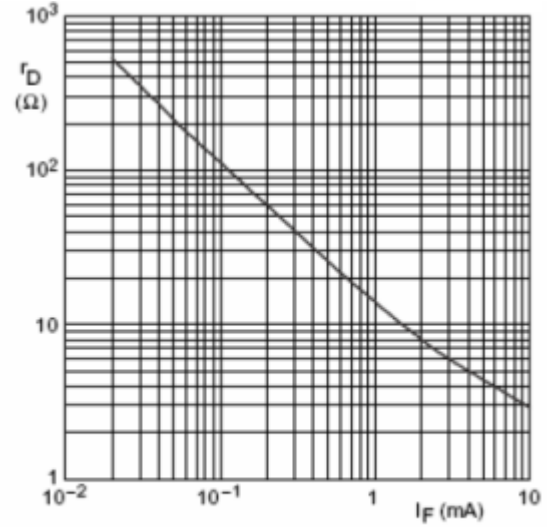
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_R	Continuous Reverse Voltage	$I_R = 10\mu\text{A}$	50	-	-	V
I_R	Reverse Voltage Leakage Current	$V_R = 50\text{V}$	-	-	100	nA
V_F	Forward Voltage	$I_F = 50\text{mA}$	-	-	1.10	V
C_{d1}	Diode Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	-	0.40	-	pF
C_{d2}		$V_R = 1\text{V}, f = 1\text{MHz}$	-	0.30	0.55	pF
C_{d3}		$V_R = 5\text{V}, f = 1\text{MHz}$	-	0.20	0.35	pF
R_{D1}	Diode Forward Resistance	$I_F = 0.5\text{mA}, f = 100\text{MHz}$	-	25	40	Ω
R_{D2}		$I_F = 1\text{mA}, f = 100\text{MHz}$	-	14	25	Ω
R_{D3}		$I_F = 10\text{mA}, f = 100\text{MHz}$	-	3	5	Ω

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



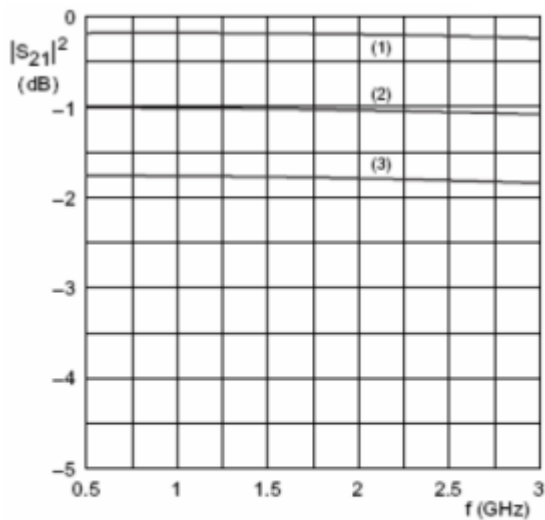
$f = 1\text{ MHz}$; $T_J = 25^\circ\text{C}$.

Fig 1 Diode capacitance as a function of reverse Voltage; typical values.



$f = 100\text{ MHz}$; $T_J = 25^\circ\text{C}$.

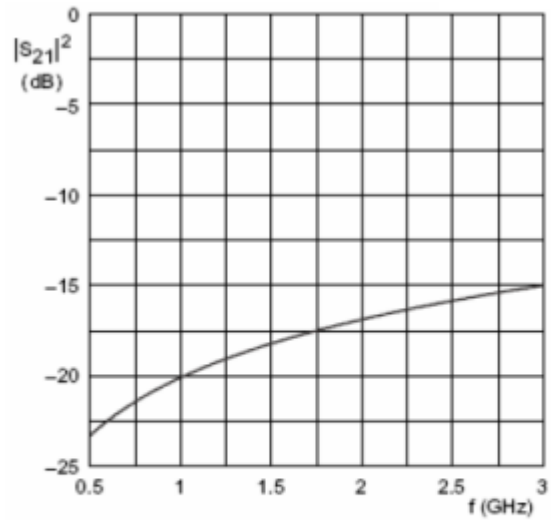
Fig 2 Forward voltage as a function of forward Current; typical values.



(1) $I_F = 10\text{ mA}$. (2) $I_F = 1\text{ mA}$. (3) $I_F = 0.5\text{ mA}$.

Diode inserted in series with a $50\ \Omega$ stripline circuit and biased via the analyzer Tee network.
 $T_{\text{amb}} = 25^\circ\text{C}$.

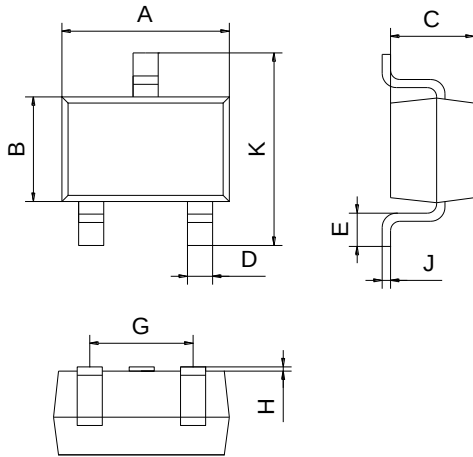
Fig 3 Insertion loss ($|S_{21}|^2$) of the diode as a function of frequency; typical values.



Diode zero biased and inserted in series with a $50\ \Omega$ stripline circuit.
 $T_{\text{amb}} = 25^\circ\text{C}$.

Fig 4 Isolation ($|S_{21}|^2$) of the diode as a function of frequency; typical values.

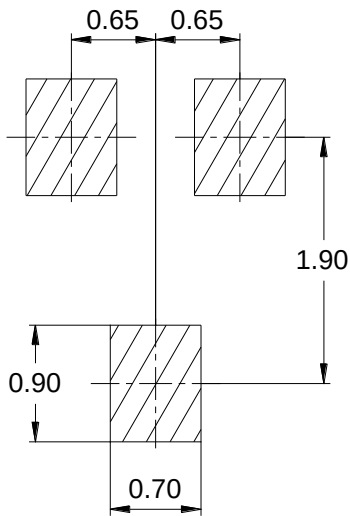
Package Outline Dimensions (Unit: mm)



SOT-323		
Dimension	Min.	Max.
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad Layout (Unit: mm)

SOT-323



IMPORTANT NOTICE

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.