

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

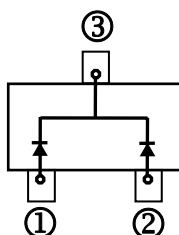
- Low diode capacitance
- Low diode forward resistance
- Low series inductance
- High voltage, current controlled
- RF resistor for RF attenuators and switches
- For applications up to 3 GHz
- RF attenuators and switches

PACKAGING INFORMATION

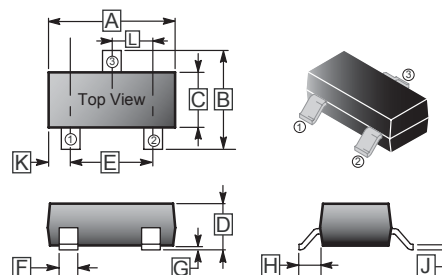
Weight: 0.0074 g (Approximate)

MARKING CODE

5W



SOT-323



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 1.80 | 2.20 | G | 0.100 | REF. |
| B | 1.80 | 2.45 | H | 0.525 | REF. |
| C | 1.15 | 1.35 | J | 0.08 | 0.25 |
| D | 0.80 | 1.10 | K | - | - |
| E | 1.20 | 1.40 | L | 0.650 | TYP. |
| F | 0.20 | 0.40 | | | |

MAXIMUM RATINGS (at Ta = 25°C unless otherwise specified)

| Parameter | Symbol | Ratings | Unit |
|----------------------------------------|-----------------|-----------------|--------|
| Continuous Reverse Voltage | V_R | 175 | V |
| Continuous Forward Current | I_F | 100 | mA |
| Power Dissipation | P_D | 200 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 625 | °C / W |
| Junction, Storage Temperature | T_J, T_{STG} | 150, -65 ~ +150 | °C |

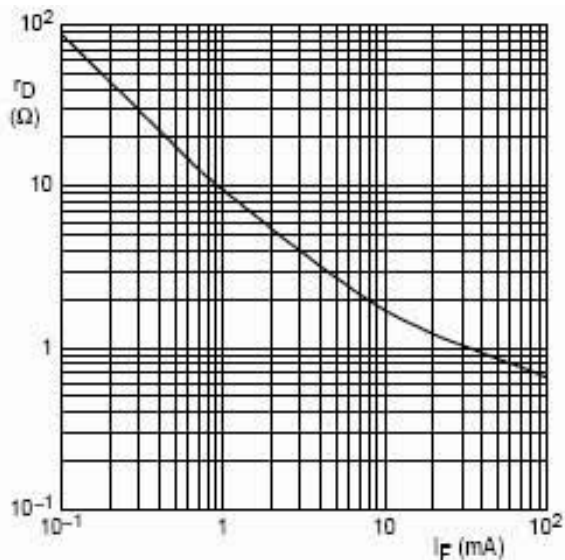
ELECTRICAL CHARACTERISTICS (at Ta = 25°C unless otherwise specified)

| Parameters | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---------------------------------|----------|------|------|------|----------|----------------------------------------------------------------------------------------------------------|
| Forward Voltage | V_F | - | - | 1.1 | V | $I_F = 50$ mA |
| Reverse Voltage Leakage Current | I_R | - | - | 10 | μ A | $V_R = 175$ V $V_R = 20$ V |
| | | | | 1 | | |
| Diode Capacitance | C_D | - | 0.52 | - | μ F | $V_R = 0, f = 1$ MHz |
| | | | 0.37 | - | | $V_R = 1$ V, $f = 1$ MHz |
| | | | 0.23 | 0.35 | | $V_R = 20$ V, $f = 1$ MHz |
| Diode Forward Resistance | r_D^* | - | 20 | 40 | Ω | $I_F = 0.5$ mA, $f = 100$ MHz |
| | | | 10 | 20 | | $I_F = 1$ mA, $f = 100$ MHz |
| | | | 2 | 3.8 | | $I_F = 10$ mA, $f = 100$ MHz |
| | | | 0.7 | 1.35 | | $I_F = 100$ mA, $f = 100$ MHz |
| Charge Carrier Life Time | τ_L | - | 1.55 | - | μ S | When switched from $I_F = 10$ mA to $I_R = 6$ mA; $R_L = 100 \Omega$; measured at $I_R = 3$ mA |
| Series Inductance | L_S | - | 1.4 | - | nH | |

* Guaranteed on AQL basis: inspection level S4, AQL 1.0.

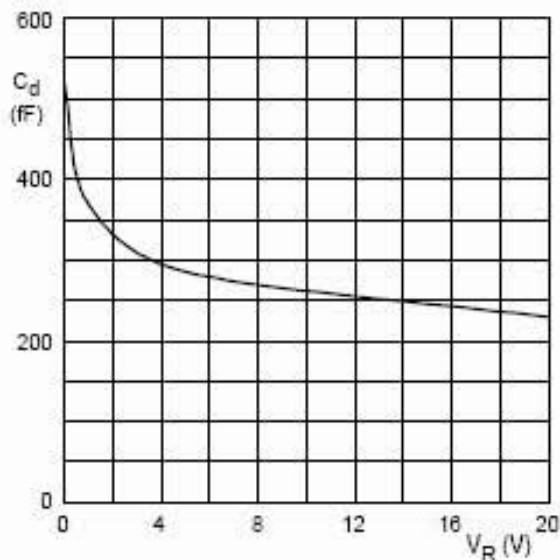
RATINGS AND CHARACTERISTIC CURVES

BAP64-05W



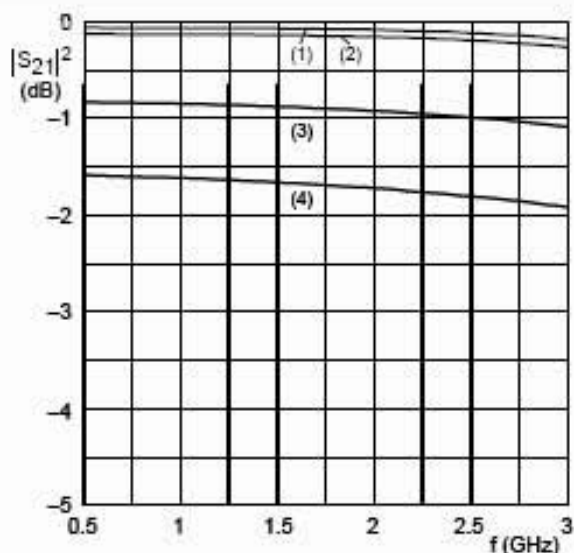
$f = 100 \text{ MHz}; T_J = 25 \text{ }^\circ\text{C}.$

Forward resistance as a function of forward current; typical values.



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

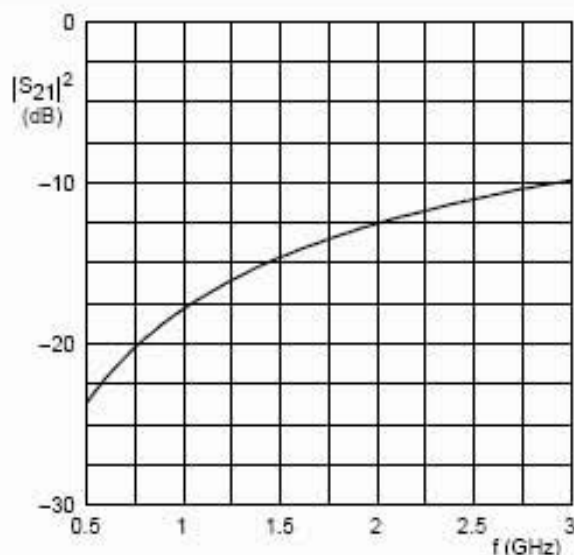
Diode capacitance as a function of reverse voltage; typical values.



- (1) $I_F = 100 \text{ mA}.$
- (2) $I_F = 10 \text{ mA}.$
- (3) $I_F = 1 \text{ mA}.$
- (4) $I_F = 0.5 \text{ mA}.$

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

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



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

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