

Small Surface Mount Diode

DB307AC

FEATURES

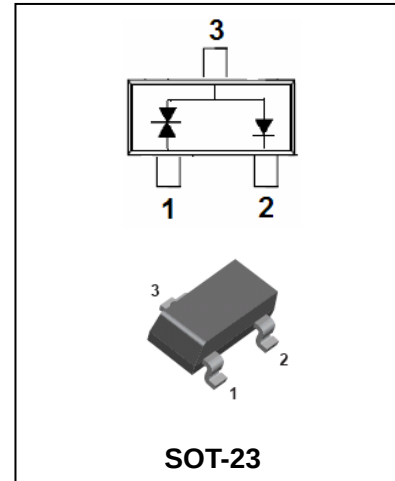
- Ideal for low power amplification.
- Ultra-Small surface mount package.
- Epitaxial planar die construction.



Lead-free

APPLICATIONS

- General diode amplification.



ORDERING INFORMATION

Type No.	Marking	Package Code
DB307AC	R7D3	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
T _j	Operating Junction Temperature Range	150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS D1 Section @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test Condition	Min	TYP	MAX	UNIT
Reverse breakdown Voltage	V _{(BR)R}	I _{BR} = 0.1mA	600	-	-	V
Reverse Leakage Current	I _R	V _R = 600V	-	-	5	μA
Forward voltage	V _F	I _F = 200mA	-	-	1200	mV
Forward current (max)	I _F		-	-	400	mA
Operating Junction and Storage Temperature	T _J , T _{stg}		-55		150	°C

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ELECTRICAL CHARACTERISTICS D2 Section @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test Condition	Min	TYP	MAX	UNIT
Repetitive peak on-state current Tp=20us,F=100Hz	I_{TRM}		2			A
Reverse breakdown Voltage	V_{BO1} V_{BO2}	C=22nF See diagram 1	28	-	36	V
Breakdown Voltage Symmetry	$[+V_{BO1} - -V_{BO2}]$	C=22nF See diagram 1	-	-	± 3	V
Dynamic Breakdown Voltage	$ \Delta V_{\pm} $	$\Delta I = [I_{BO} \text{ to } I_F = 10\text{mA}]$ See diagram 1	5	-	-	V
Output voltage	V_o	See diagram 2	5	-	-	V
Breakdown current	I_{BO}	C=22nF	-	-	100	μA
Leakage current	I_B	$V_B = 0.5V_{BO\text{max}}$ See diagram 1	-	-	10	μA
Rise time	t_r	See diagram 3	-	1.5	-	μs

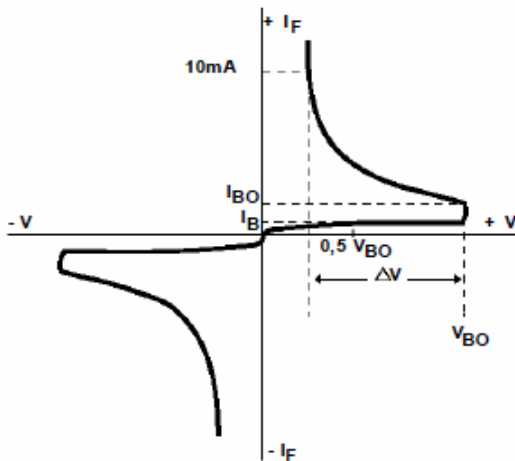


DIAGRAM 1 : Current-voltage characteristics

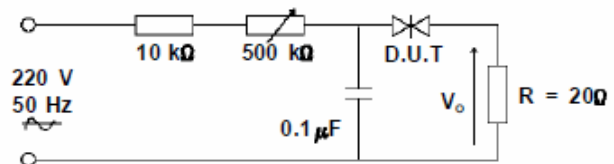


DIAGRAM 2 : Test circuit for output voltage

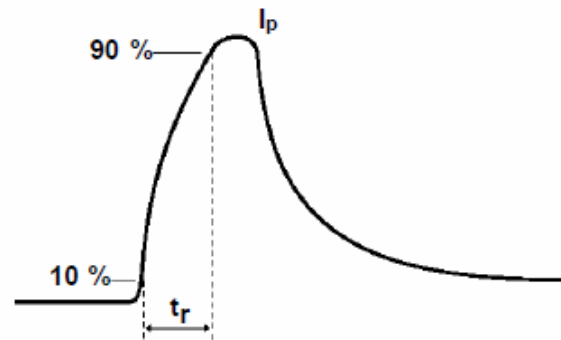


DIAGRAM 3 : Test circuit see diagram 2.
Adjust R for $I_p=0.5\text{A}$

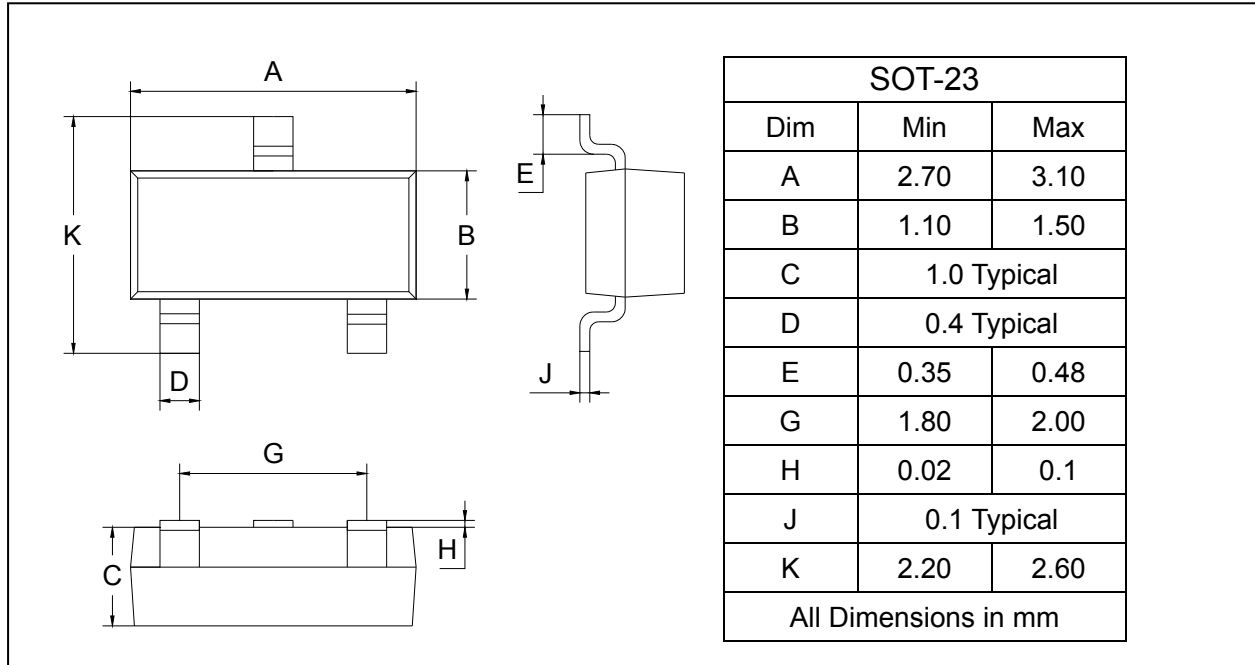
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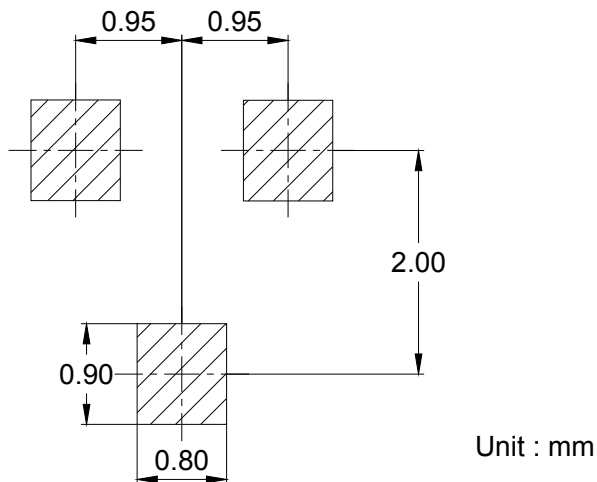
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
DB307AC	SOT-23	3000/Tape&Reel