

FEATURES

- | Small Signal Diode
- | Meet AEC-Q101 Requirements



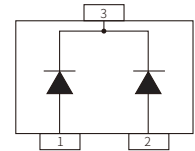
SOT-23

APPLICATIONS

- | Switching Speed
- | General-purpose Switching Applications
- | High Conductivity
- | Meet The Stringent Requirements Of Automotive Applications



Marking



Schematic Symbol

APPROVALS

- RoHS** | Compliance with 2011/65/EU
- HF** | Compliance with IEC61249-2-21:2003

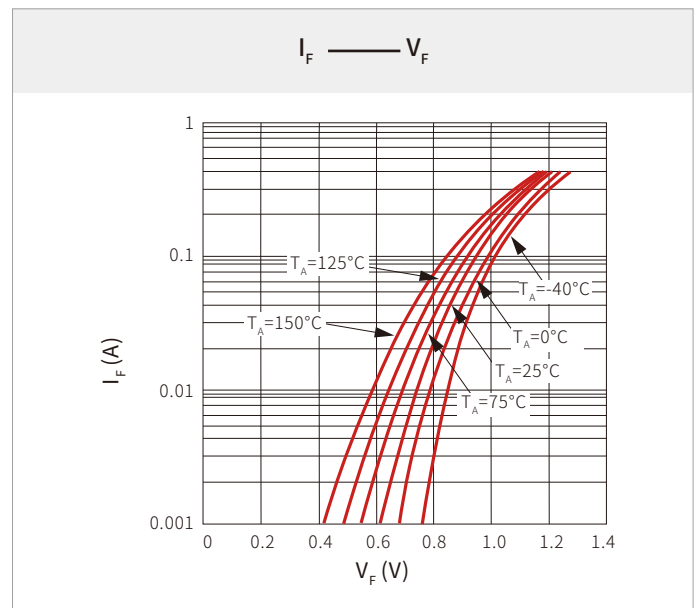
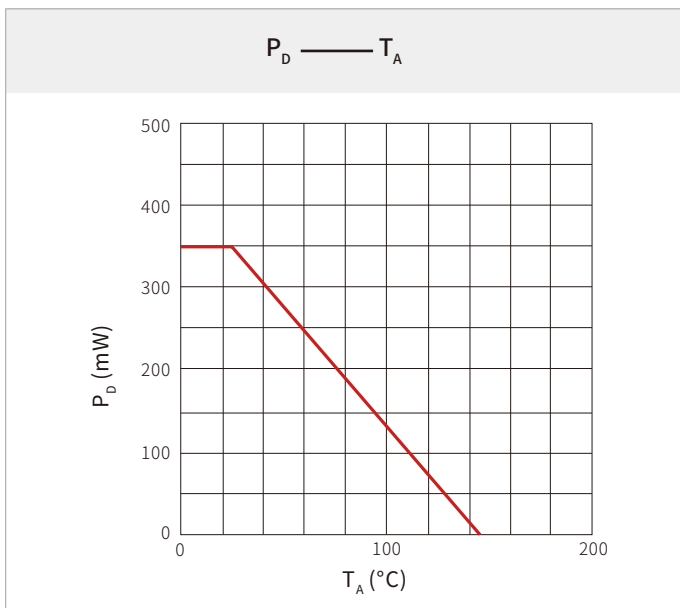
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

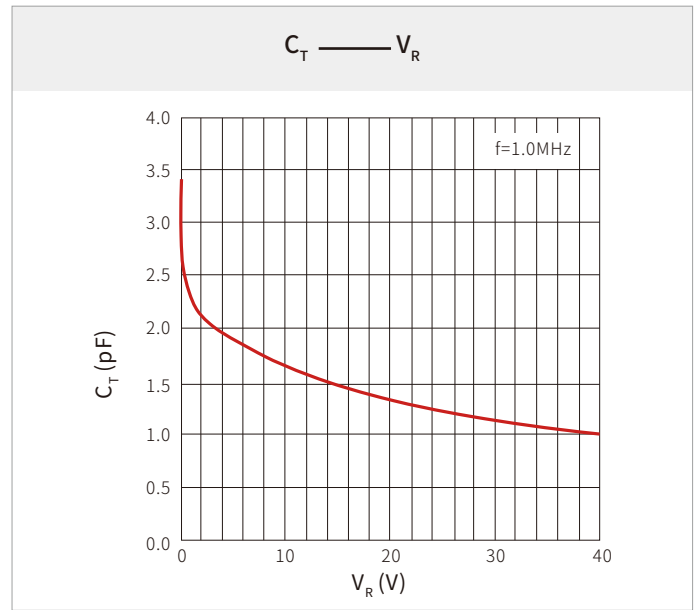
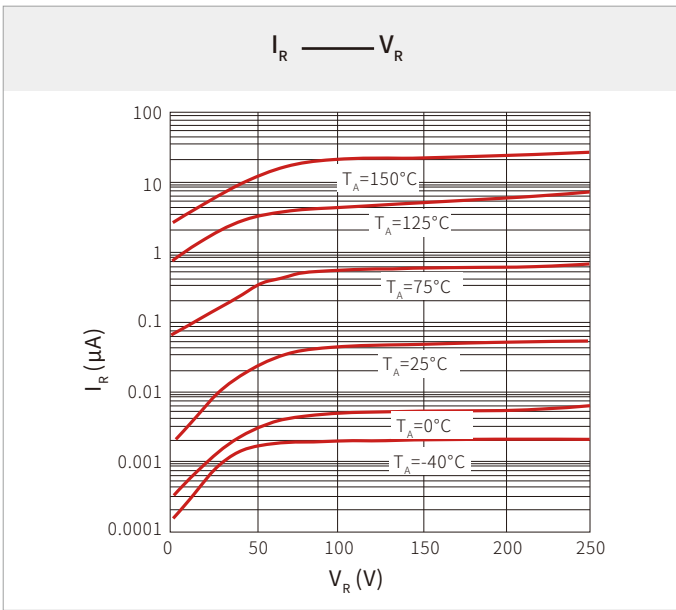
Parameter	Symbol	Value	Unit
Repetitive Reverse Voltage	V_{RRM}	250	V
Reverse Voltage	V_R	200	V
Working Peak Reverse Voltage	V_{RWM}	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	141	V
Average Rectified Forward Current	I_{FM}	400	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	pulse width=1.0 μ s	9.0
		pulse width=100 μ s	3.0
		pulse width=10ms	1.7
Repetitive Peak Forward Surge Current	I_{FRM}	625	mA
Power Dissipation	P_D	350	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature Range	T_j, T_{stg}	-65 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Parameter	Test Condition	Symbol	Min.	Max.	Unit
Breakdown Voltage	$I_R = 100\mu\text{A}$	V_R	250		V
Instantaneous Reverse Current	$V_R=250\text{V}, T_J=25^\circ\text{C}$	I_R		100	nA
	$V_R=250\text{V}, T_J=150^\circ\text{C}$			100	μA
Forward Voltage	$I_F=100\text{mA}$	V_F		1.0	V
	$I_F=200\text{mA}$			1.25	
Reverse Recovery Time	$I_F=I_R=30\text{mA}$ $I_{RR}=0.1 \times I_R, R_L=100\Omega$	t_{rr}		50	nS
Capacitance	$V_R=0\text{V}, f=1\text{MHZ}$	C_T		5	pF

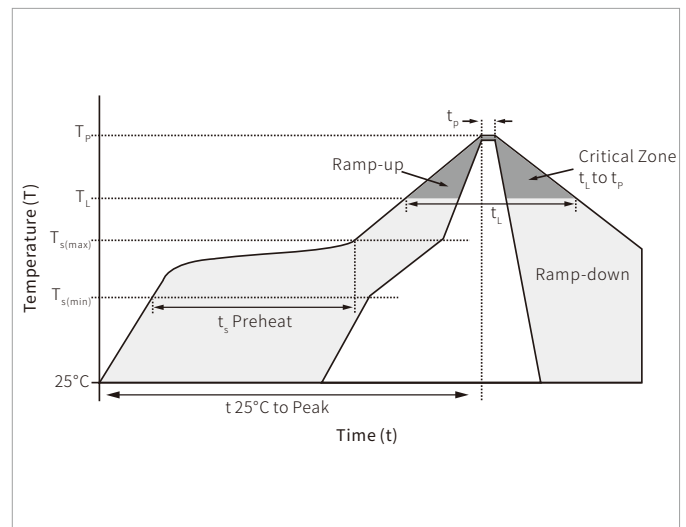
CHARACTERISTIC CURVES



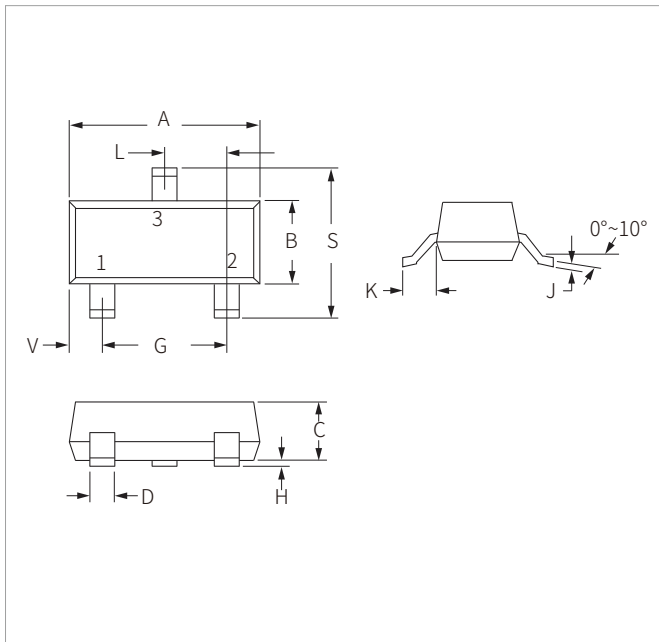


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

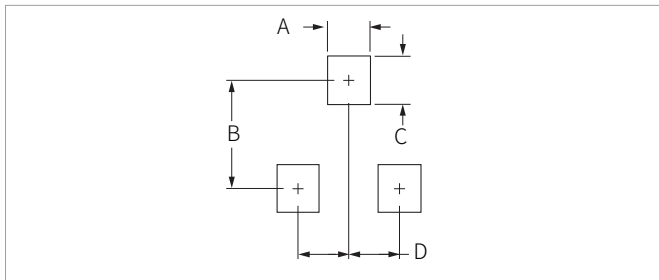


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BAS21CQ	SOT-23	3000PCS	7"

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By QR Code

Website



Wechat

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