

FEATURES

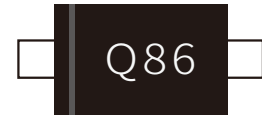
- | High Current Capability
- | Low Forward Voltage Drop
- | Meet AEC-Q101 Requirements



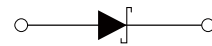
SOD-323

APPLICATIONS

- | Small signal diode
- | 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°C)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V _{RRM}	30	V
Continuous forward current	I _F	200	mA
Surge non repetitive forward current	I _{FSM}	600	mA
Power Dissipation	P _D	250	mW
Typical Thermal Resistance Junction to Ambient	R _{θJA}	430	°C/W
Junction Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Peak Forward voltage	V_F	$I_F=0.1\text{mA}$			240	mV
		$I_F=1.0\text{mA}$			320	
		$I_F=10\text{mA}$			400	
		$I_F=30\text{mA}$			500	
				$I_F=100\text{mA}$		
Reverse Voltage	V_R	$I_R=10\mu\text{A}$	30			V
Instantaneous Reverse Current	I_R	$V_R=25\text{V}$			2.0	μA
Total capacitance	C_T	$V_R=1.0\text{V}, f=1.0\text{MHz}$			10	pF
Reverse recovery time	t_{rr}	$I_{RR}=1.0\text{mA}, R_L=100\Omega$ $I_F=1_R=10\text{mA}$			5.0	nS

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

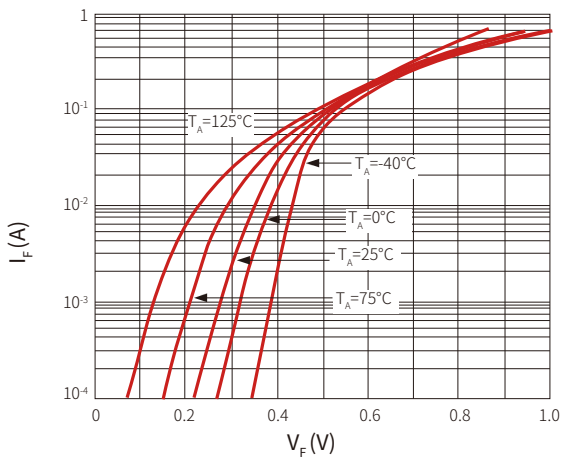


Fig.2 Reverse Characteristics

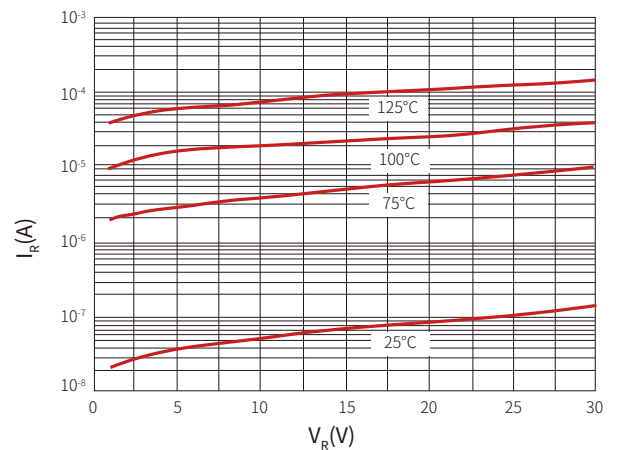
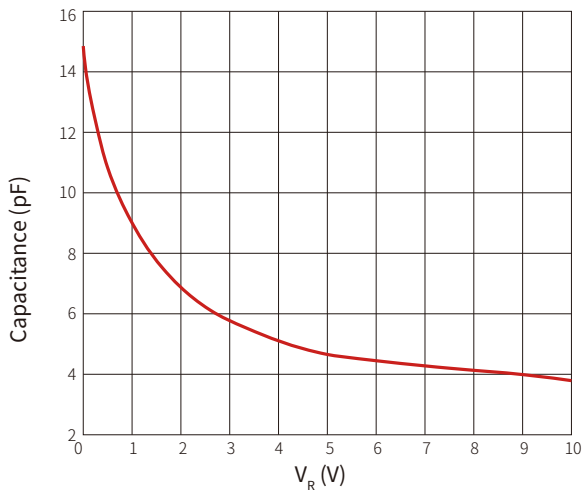
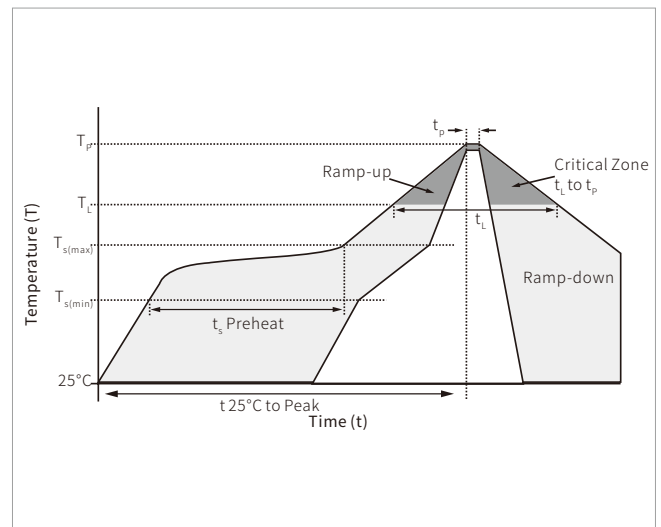


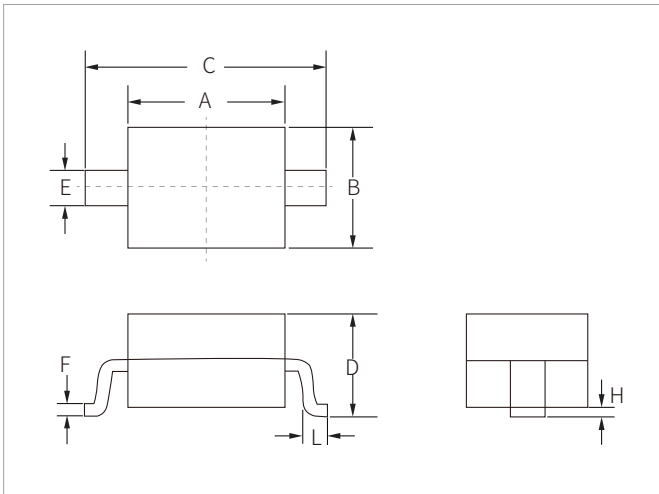
Fig.3 Capacitance Characteristics


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

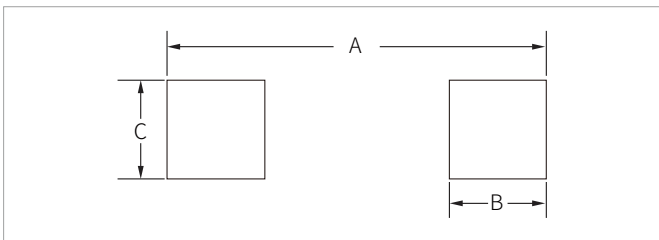


SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.35	2.75	0.093	0.108
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	0.40	0.008	0.016

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BAT54WSQ	SOD-323	3000PCS	7"

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By QR Code

Website



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