

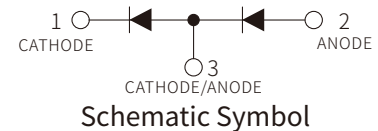
## FEATURES

- | Very Low Capacitance
- | Low Forward Voltage



## MECHANICAL DATA

- | SOT-23 Small Outline Plastic Package
- | Epoxy UL: 94V-0
- | Mounting Position: Any



## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

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

Parameter	Symbol	Value	Unit	
Continuous Reverse Voltage	$V_R$	7	V	
Total Device Dissipation FR-5 Board <sup>(1)</sup>	$P_d$	$T_A=25^\circ\text{C}$	225	mW
		Derate above $25^\circ\text{C}$	1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$	
Total Device Dissipation Alumina Substrate <sup>(2)</sup>	$P_d$	$T_A=25^\circ\text{C}$	300	mW
		Derate above $25^\circ\text{C}$	2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$	
Operating Junction Temperature	$T_J$	150	$^\circ\text{C}$	
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

Note1: FR-5=1.0\*0.75\*0.062 in.

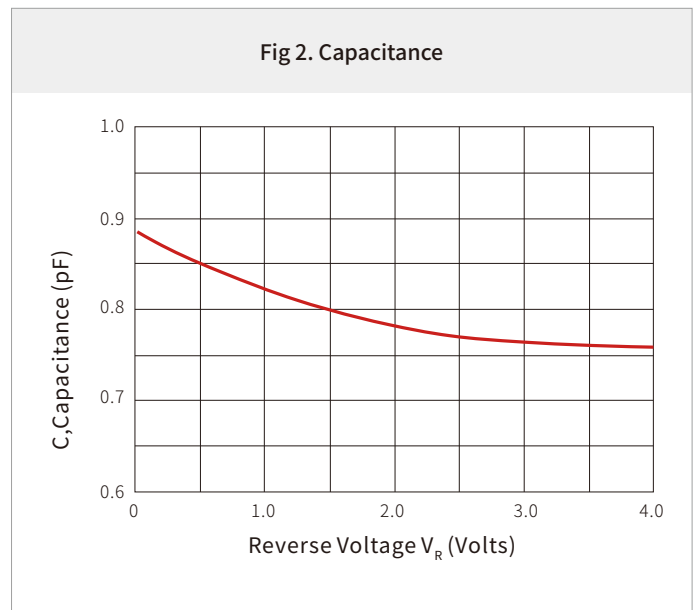
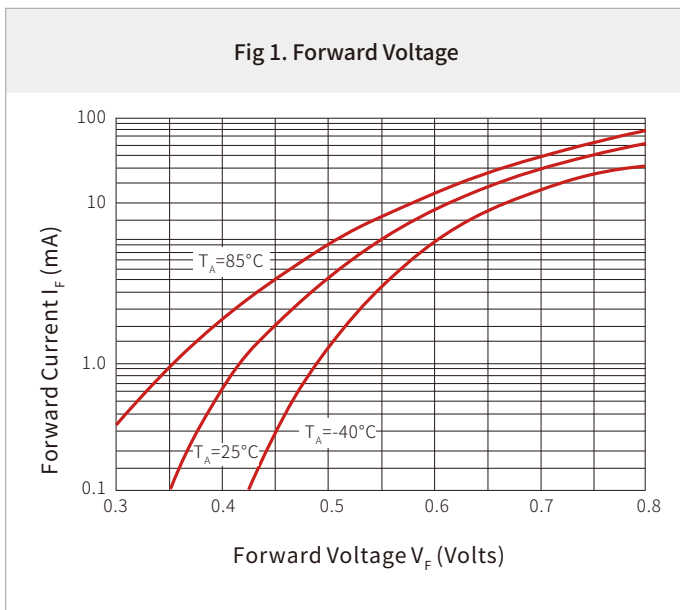
Note2: Alumina=0.4\*0.3\*0.024 in. 99.5% alumina.

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

Parameter	Test Condition	Symbol	Min.	Max.	Unit
Forward Voltage	$I_F = 10\text{mA}$	$V_F$		0.6	V
Reverse Leakage Current <sup>(3)</sup>	$V_R = 3\text{V}$	$I_R$		0.25	$\mu\text{A}$
	$V_R = 7\text{V}$			10	
Total Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	$C_{\text{tot}}$		1.0	pF

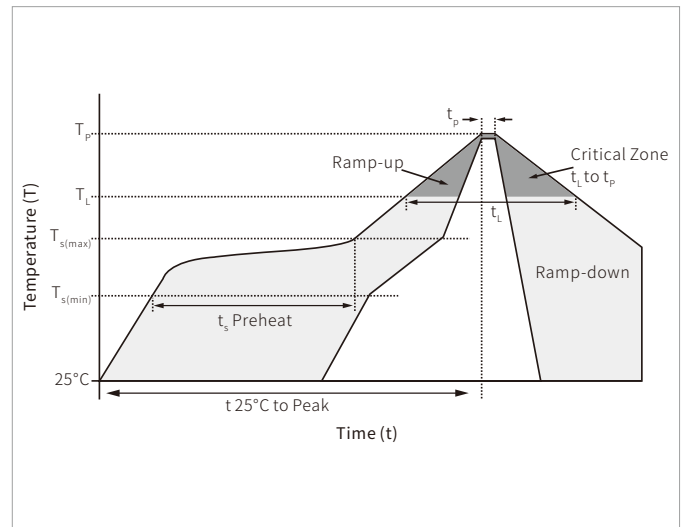
Note3: For each individual diode while the second diode is unbiased

## CHARACTERISTIC CURVES

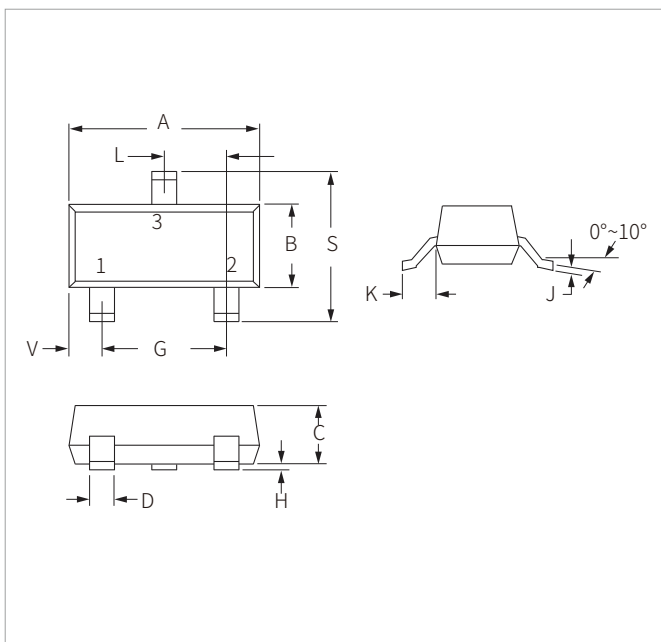


## SOLDERING PARAMETERS

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) ( $t_r$ )	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

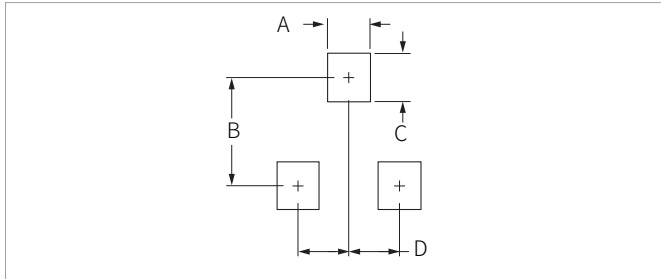


## SOT-23 PACKAGE INFORMATION



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
MMBD353	SOT-23	3000PCS	7"

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