

2A/40V ULTRA-LOW VF SURFACE MOUNT SCHOTTKY DIODE

These ultra-efficient, low VF Schottky diodes feature high current capability, while housed in a very small SOD-123 Flat Lead package. They are ideal for applications requiring maximum power dissipation per board area.

FEATURES

- PN Guard-Ring Die Construction for Transient Protection
- High Current Capability
- Low V_F for Reduced Forward Conduction Loss
- Lead-Free Plating (100% Matte Tin Finish)

APPLICATIONS

- Mobile Phones and Accessories
- Hand-Held Computers

MARKING CODE: GP

MAXIMUM RATINGS $T_J = 25^\circ\text{C}$ Unless otherwise noted

Rating	Symbol	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Continuous Reverse Voltage	V_R	40	V
Continuous Forward Current	$I_F (AV)$	2.0	A
Non-repetitive Peak Forward Current, $t = 1\text{sec}$, Square Wave	I_{FSM}	50	A
Total Power Dissipation (Note 1)	P_{tot}	550	mW
Operating Junction Temperature Range	T_J	-55 to +125	C
Storage Temperature Range	T_{stg}	-55 to +150	C

Note 1. FR-5 Board 1.0 x 0.75 x 0.062 in.

THERMAL CHARACTERISTICS

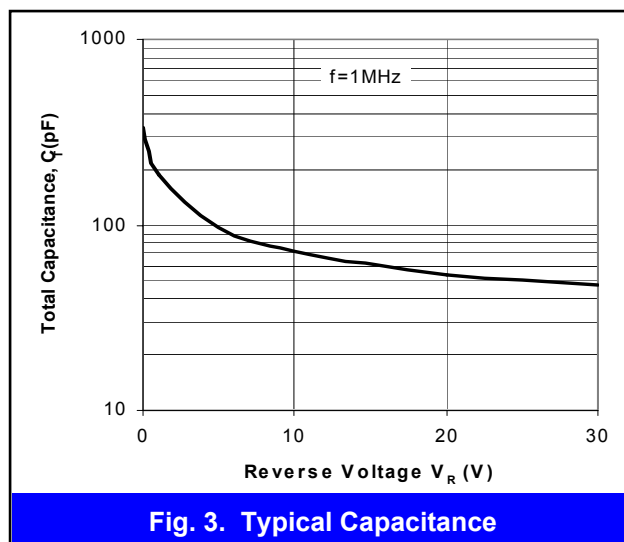
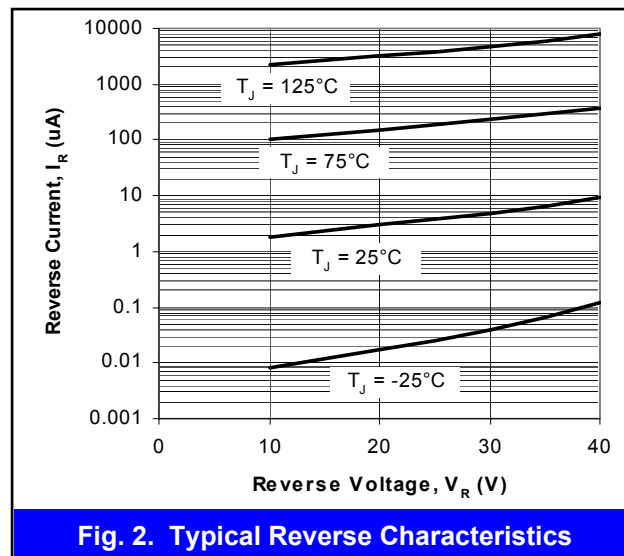
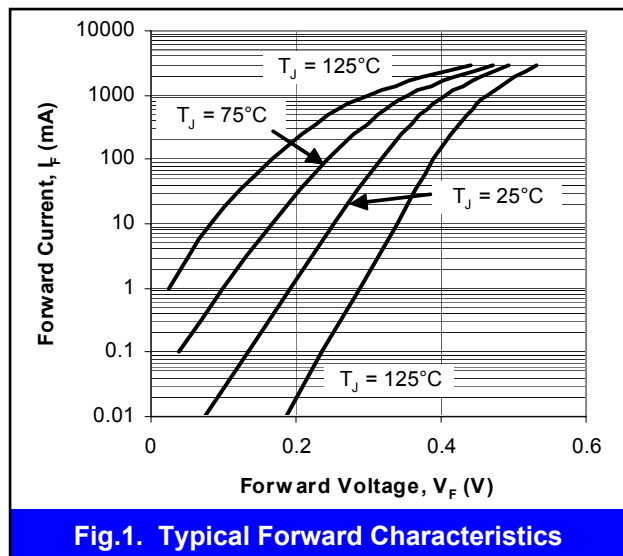
Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	R_{thja}	181	$^\circ\text{C/W}$



ELECTRICAL CHARACTERISTICS
 $T_J = 25^\circ\text{C}$ Unless otherwise noted

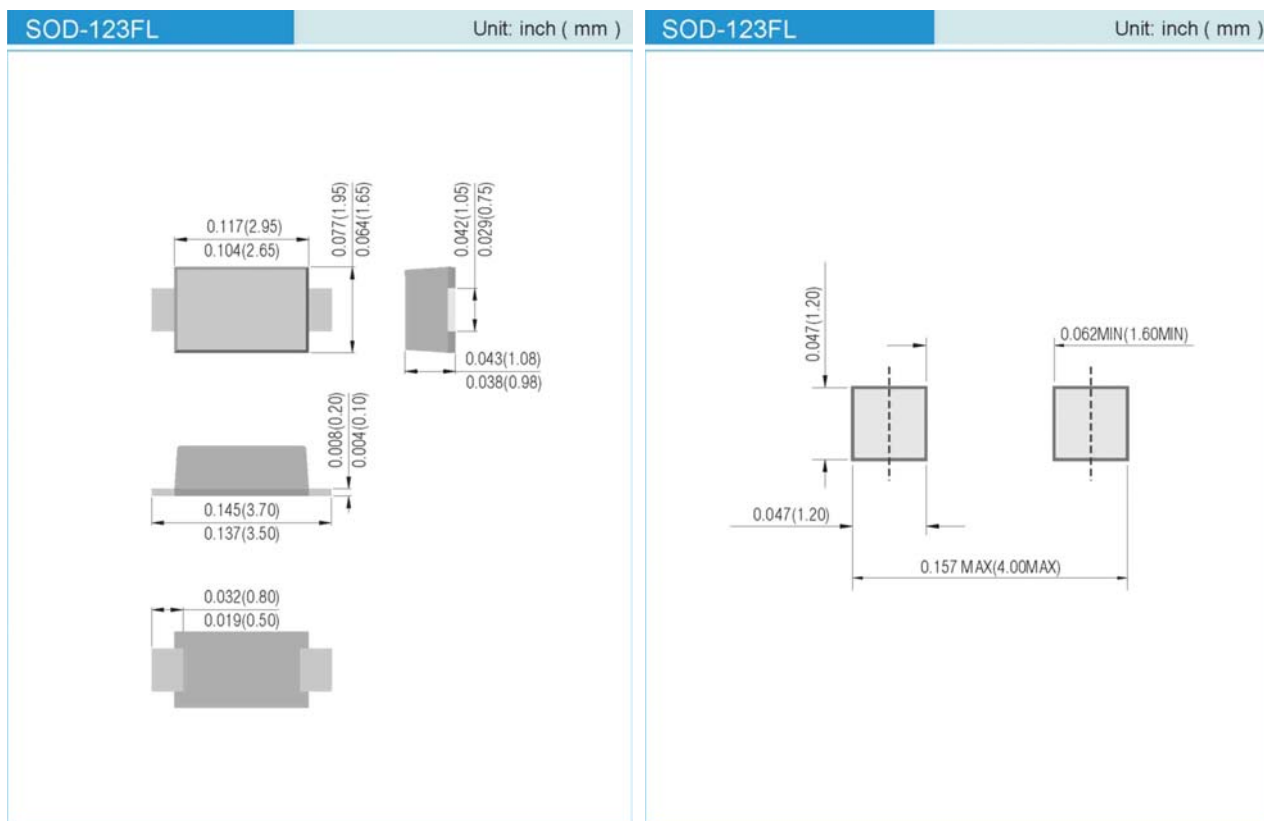
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage (Note 1)	V_{BR}	$I_{BR} = 0.5\text{mA}$	40	-	-	V
Forward Voltage (Note 1)	V_F	$I_F = 1.0\text{A}$	-	0.4	0.45	V
		$I_F = 2.0\text{A}$	-	0.45	0.50	
		$I_F = 3.0\text{A}$	-	0.5	0.65	
Reverse Leakage Current (Note 1)	I_R	$V_R = 20\text{V}$	-	0.003	0.15	mA
		$V_R = 20\text{V}$ $T_J = 85^\circ\text{C}$	-	-	18	
		$V_R = 40\text{V}$	-	0.01	0.5	
		$V_R = 40\text{V}$ $T_J = 85^\circ\text{C}$	-	-	25	
Total Capacitance	C_T	10Vdc Bias, $f = 1\text{MHz}$	-	70	-	pF

Note 1. Short duration pulse to avoid self-heating effect.

TYPICAL CHARACTERISTIC CURVES




PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS



ORDERING INFORMATION

SS2040FL T/R7 - 7 inch reel, 3K units per reel

SS2040FL T/R13 - 13 inch reel, 10K units per reel

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