



# SS2040FL



## 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.

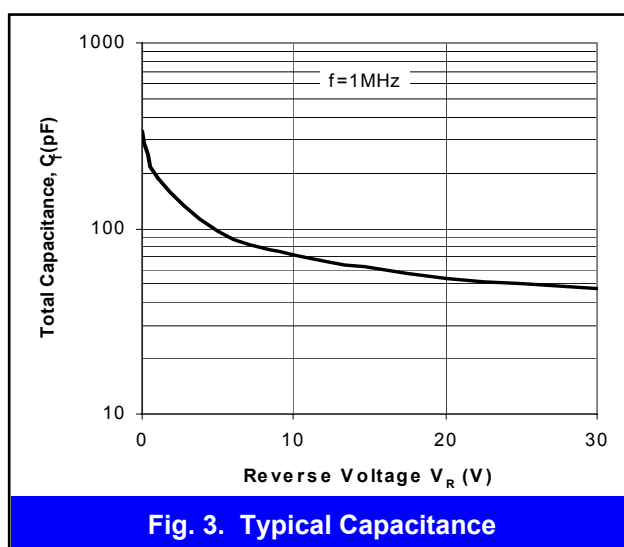
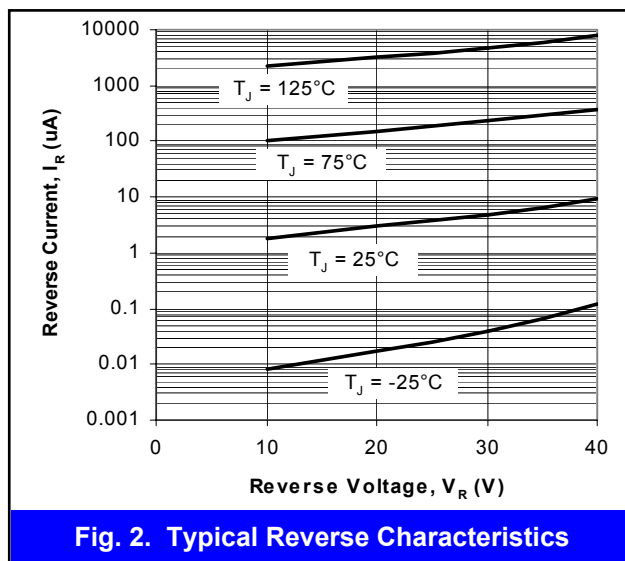
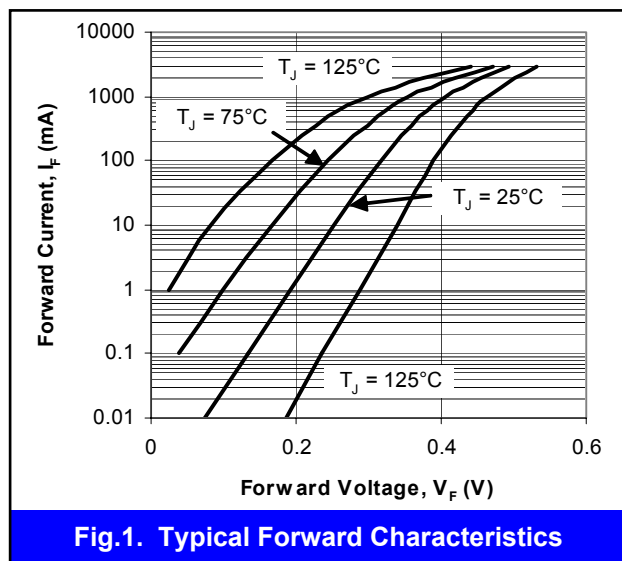
### THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	$R_{thja}$	181	°C/W

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

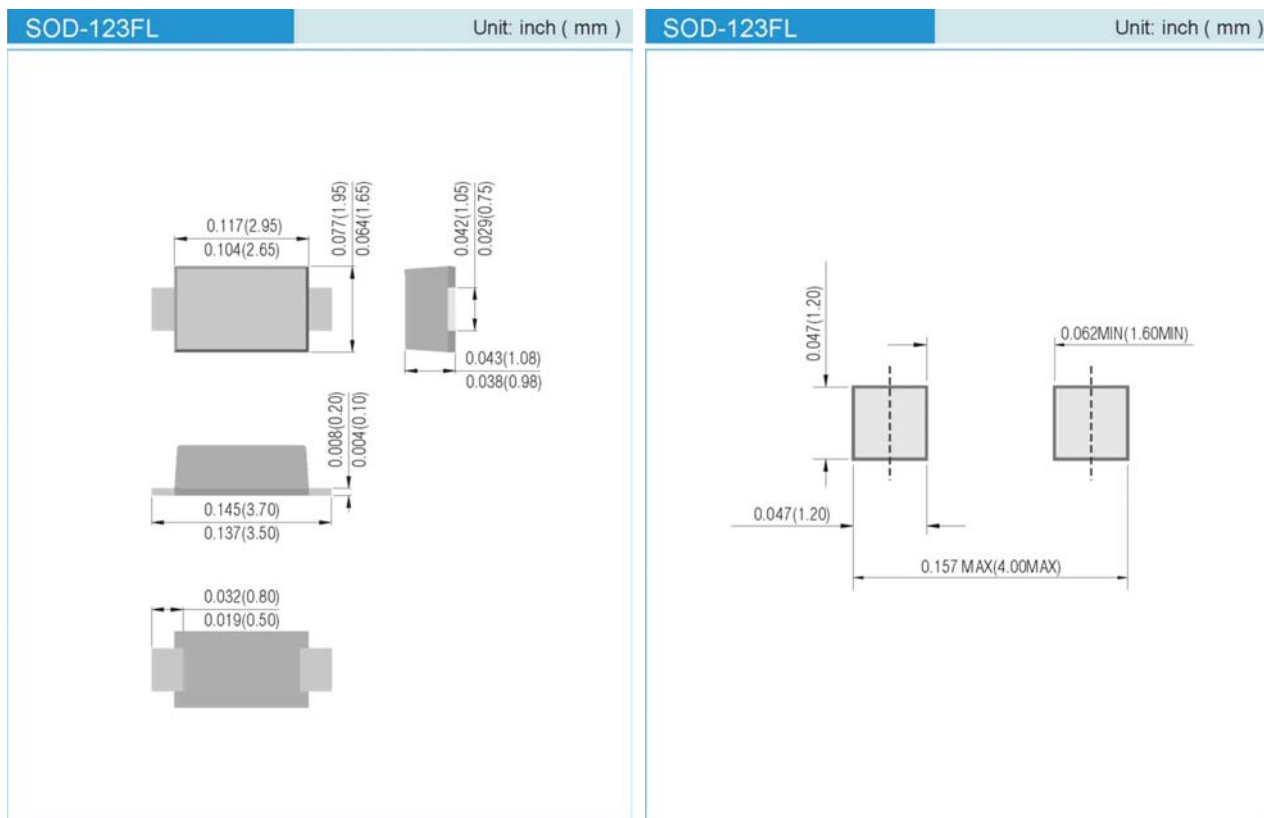
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage (Note 1)	$V_{BR}$	$I_{BR} = 0.5\text{mA}$	40	-	-	V
Forward Voltage (Note 1)	$V_F$	$I_F = 1.0\text{A}$	-	0.4	0.45	V
		$I_F = 2.0\text{A}$	-	0.45	0.50	
		$I_F = 3.0\text{A}$	-	0.5	0.65	
Reverse Leakage Current (Note 1)	$I_R$	$V_R = 20\text{V}$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

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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