

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°C Unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage (Note 1)	V _{BR}	I _{BR} = 0.5mA	40	-	-	V
Forward Voltage (Note 1)	V _F	I _F = 1.0A	-	0.4	0.45	V
		I _F = 2.0A	-	0.45	0.50	
		I _F = 3.0A	-	0.5	0.65	
Reverse Leakage Current (Note 1)	I _R	V _R = 20V	-	0.003	0.15	mA
		V _R = 20V T _J = 85°C	-	-	18	
		V _R = 40V	-	0.01	0.5	
Total Capacitance	C _T	V _R = 40V T _J = 85°C	-	-	25	pF
		10Vdc Bias, f = 1 MHz	-	70	-	

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

TYPICAL CHARACTERISTIC CURVES

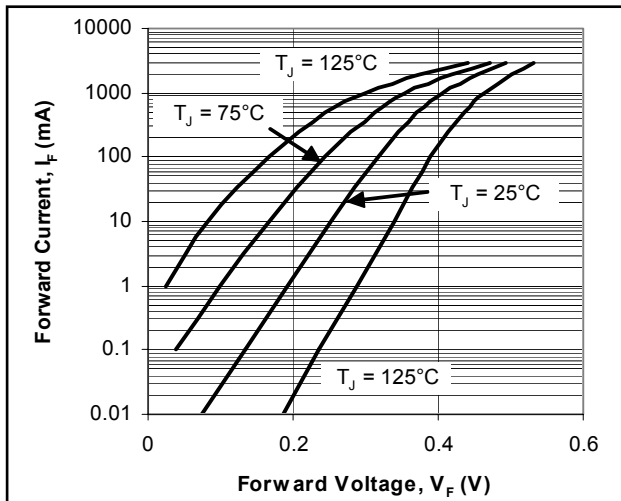


Fig. 1. Typical Forward Characteristics

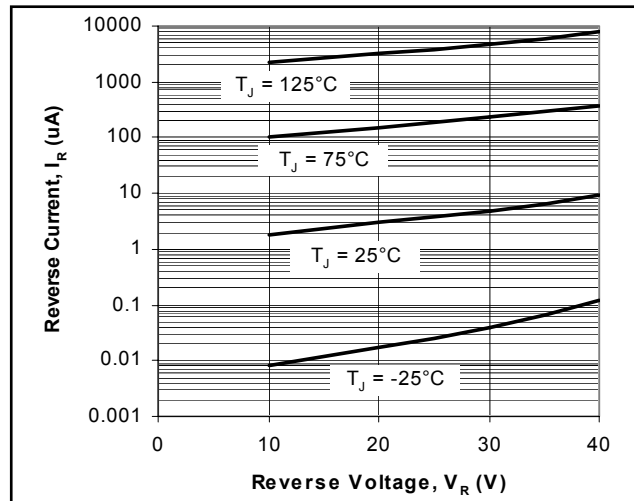


Fig. 2. Typical Reverse Characteristics

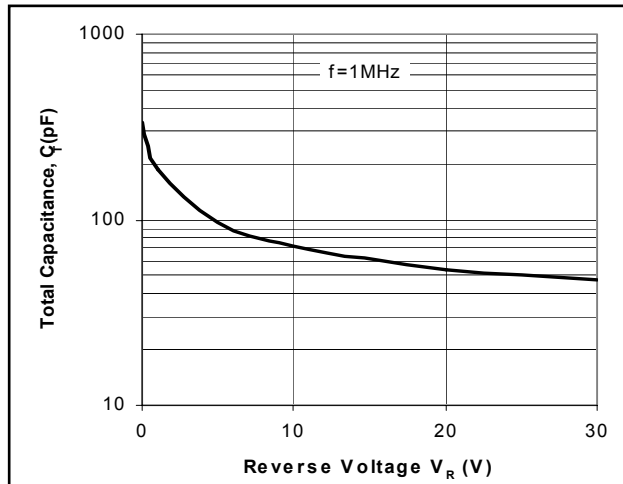
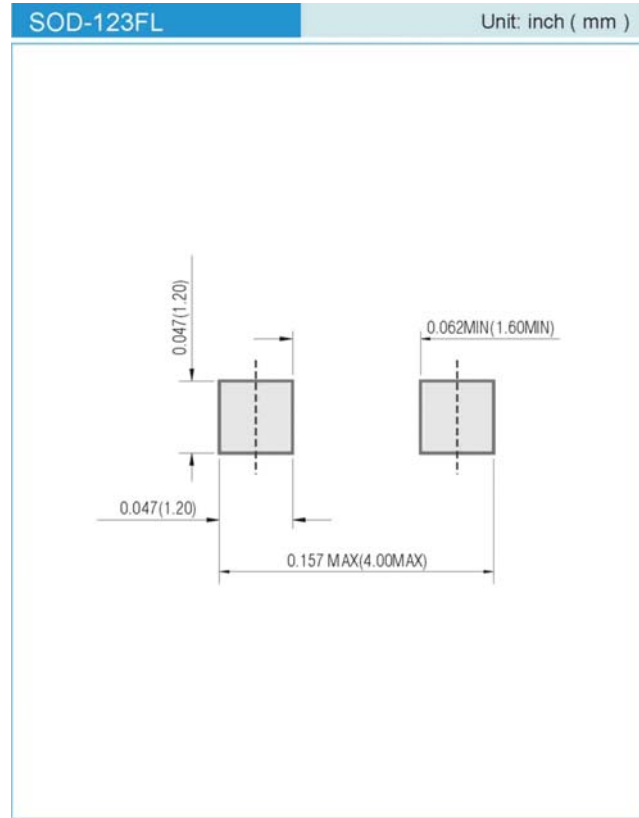
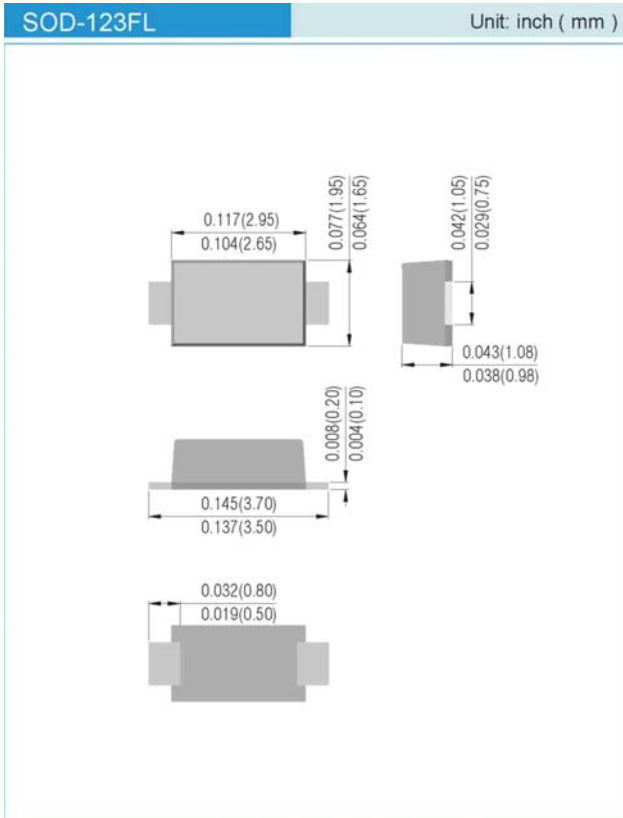


Fig. 3. Typical Capacitance



SS2040FL

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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