



**THE DATASHEET OF  
SM5817PL-TP**



# SM5817PL THRU SM5819PL

## Schottky Barrier Diodes 20 to 40 Volts

### Features

- Halogen free available upon request by adding suffix "-HF"
- High Surge Capability
- Low Forward Voltage
- Low Profile Package
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

### Mechanical Data

- Packaging: SOD-123FL
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking Code: SM5817PL---K2; SM5818PL---K3 ; SM5819PL---K4

### Maximum Ratings

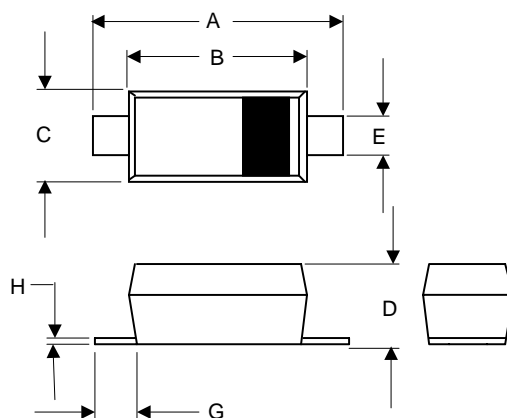
Symbol	Rating	Rating	Unit	
$V_{RMS}$	Maximum RMS Voltage	SM5817PL SM5818PL SM5819PL	14 21 28	V
	Repetitive Reverse Voltage	SM5817PL	20	V
		SM5818PL	30	
SM5819PL		40		
$I_{F(AV)}$	Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_L=90^\circ C$	1.0	A	
$I_{FSM}$	Surge Forward Current at $T_L=70^\circ C, 8.3ms$	30	A	
$R_{\theta JA}$	Typical Thermal Resistance(Note2)	88	$^\circ C/W$	
$R_{\theta JC}$		43	$^\circ C/W$	
$R_{\theta JL}$		30	$^\circ C/W$	
$P_D$	Power Dissipation	1.14	W	
$T_J$	Junction Temperature	-65 to +125	$^\circ C$	
$T_{STG}$	Storage Temperature	-65 to +125	$^\circ C$	

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units	
$V_F$	Forward Voltage (@1A dc)	SM5817PL	---	---	0.45	V
		SM5818PL	---	---	0.56	
		SM5819PL	---	---	0.60	
$I_R$	Leakage Current					
		@ $T_A=25^\circ C$	---	---	0.1	mA
		@ $T_A=100^\circ C$	---	---	9.0	mA
$C_j$	Typical Junction Capacitance @ $f=1.0MHz, V_r=4V$	---	110	---	pF	

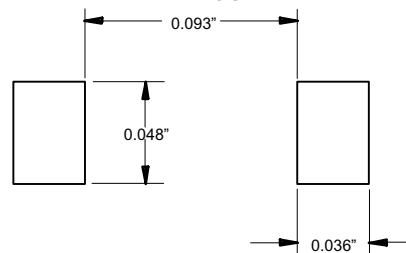
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.  
2. Thermal Resistance : PC Board Mounted on 0.2\*0.2"(5\*5mm) copper pad area.

### SOD-123FL



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.122	2.55	3.10	
C	.055	.075	1.40	1.90	
D	.035	.053	0.90	1.35	
E	.020	.041	0.50	1.05	
G	.010	-----	0.25	-----	
H	-----	.010	----	.25	

### SUGGESTED SOLDER PAD LAYOUT



# SM5817PL-SM5819PL



Micro Commercial Components

Fig. 1-TYPICAL FORWARD CURRENT

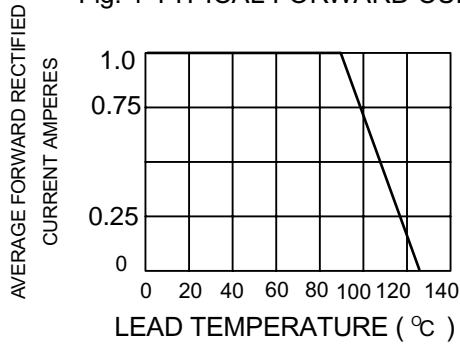


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

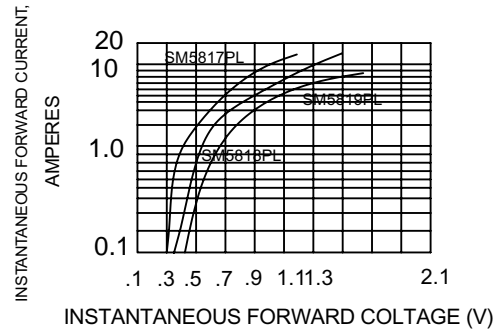


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

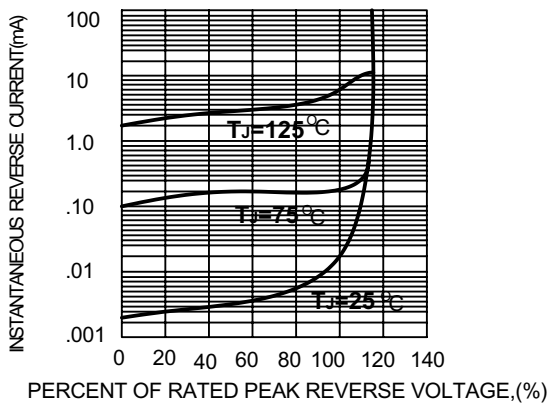


Fig. 4-FORWARD SURGE CURRENT

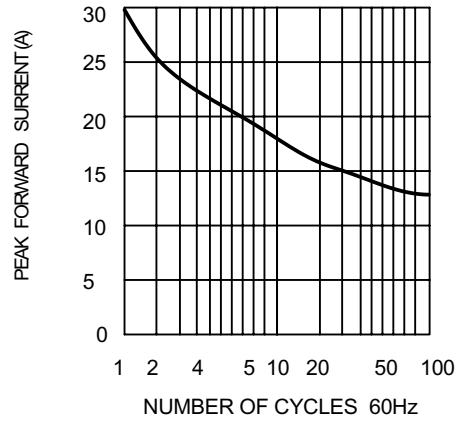
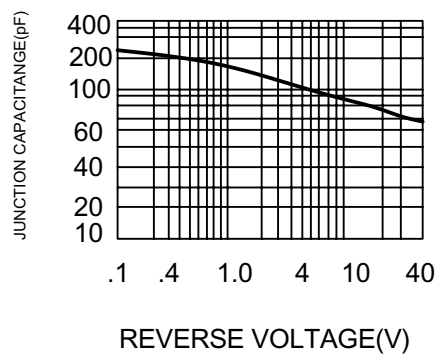


Fig. 5-TYPICAL JUNCTION CAPACITANCE





Micro Commercial Components

### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

[www.mccsemi.com](http://www.mccsemi.com)

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View SM5817PL-TP on WIN SOURCE](#)
- ⊖ [Micro Commercial Co](#) Information

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management