SM5817PL
THRU
SM5819PL

Schottky Barrier Diodes
20 to 40 Volts

Features

- High Surge Capability
- Low Forward Voltage
- Low Profile Package
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
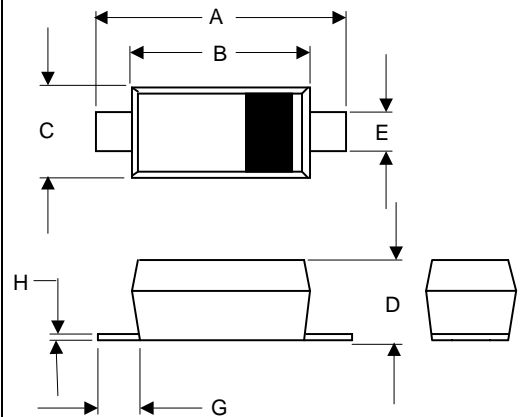
Mechanical Data

- 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
V_{RRM}	Repetitive Reverse Voltage	SM5817PL SM5818PL SM5819PL	20 30 40	V
$I_{F(AV)}$	Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_L=90^OC$		1.0	A
I_{FSM}	Surge Forward Current at ,$T_L=70^OC$,8.3ms		30	A
R_{thJA} R_{thJC} R_{thJL}	Typical Thermal Resistance(Note2)		88 43 30	℃/W ℃/W ℃/W
P_D	Power Dissipation		1.14	W
T_J	Junction Temperature		-65 to +125	℃
T_{STG}	Storage Temperature		-65 to +125	℃

Electrical Characteristics @ 25⁰C Unless Otherwise Specified

Symbol	Parameter		Min	Typ	Max	Units
V_F	Forward Voltage (@1A dc)	SM5817PL SM5818PL SM5819PL	--- --- ---	0.45 0.56 0.60	--- --- ---	V
I_R	Leakage Current					
		@TA=25℃	---	0.1	----	mA
		@TA=100 ℃	---	9.0	---	mA
C_J	Typical Junction Capacitance @f=1.0MHz,Vr=4V		---	110	---	pF

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

2. Thermal Resistence : PC Board Mounted on 0.2*0.2"(5*5mm) copper pad area.

SOD-123FL

DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	.037	.053	0.95	1.35	
E	.020	.039	0.50	1.00	
G	.010	-----	0.25	-----	
H	-----	.008	----	.20	

SUGGESTED SOLDER
PAD LAYOUT

0.093"

0.048"

0.036"
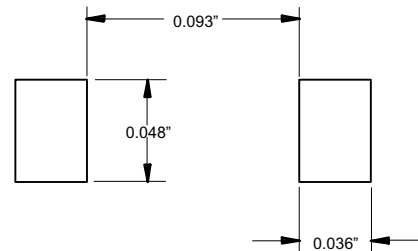
SM5817PL-SM5819PL

Fig. 1-TYPICAL FORWARD CURRENT

AVERAGE FORWARD RECTIFIED CURRENT AMPERES

1.0
0.75
0.25
0

0 20 40 60 80 100 120 140

LEAD TEMPERATURE (℃)
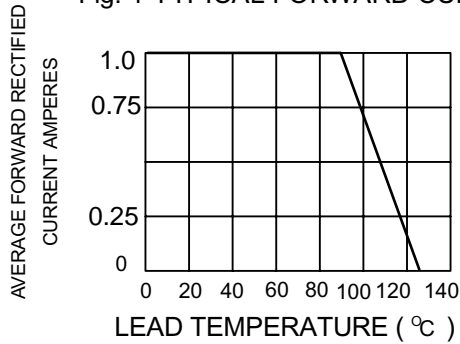
Fig. 2-TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT, AMPERES

20
10

SM5817PL

SM5819PL

1.0

SM5818PL

0.1

.1 .3 .5 .7 .9 1.1 1.3   2.1

INSTANTANEOUS FORWARD COLTAGE (V)
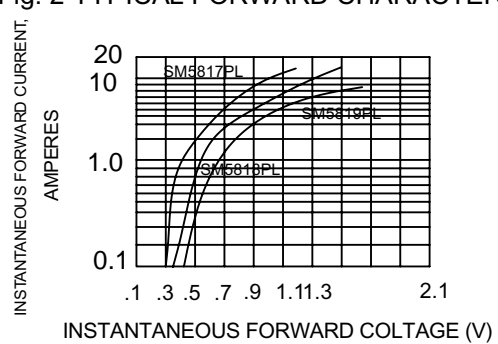
Fig. 3-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT(mA)

100
10
1.0

TJ=125℃

.10

TJ=75℃

.01

TJ=25℃

.001

0 20 40 60 80 100 120 140

PERCENT OF RATED PEAK REVERSE VOLTAGE,(%)
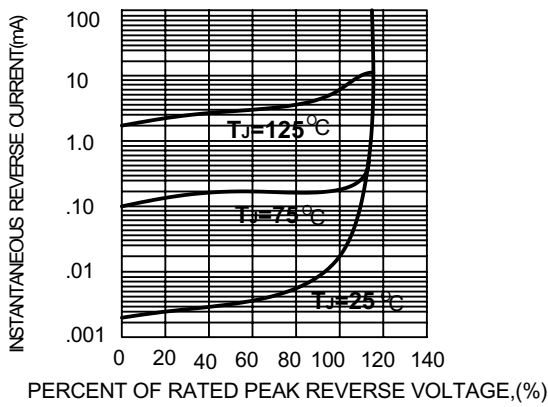
Fig. 4-FORWARD SURGE CURRENT

PEAK FORWARD SURRENT(A)

30
25
20
15
10
5
0

1 2   4   5 10 20   50 100

NUMBER OF CYCLES 60Hz

Fig. 5-TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANGE(pF)

400
200
100
60
40
20
10

.1   .4   1.0   4   10   40

REVERSE VOLTAGE(V)

www.mccsemi.com
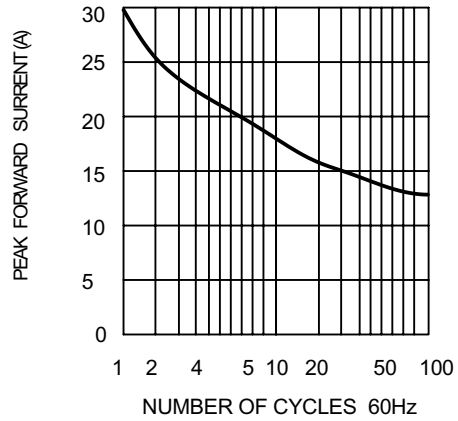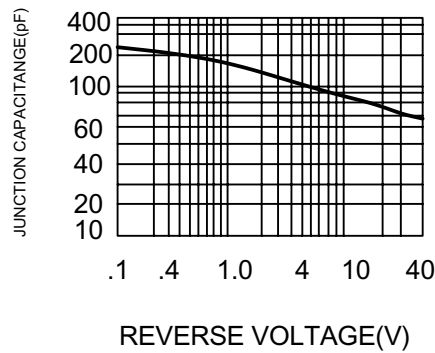
Ordering Information :

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

www.mccsemi.com