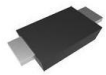


SM5817PL-TP Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	SM5817PL-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	SM5817PL-TP
Description	DIODE SCHOTTKY 20V 1A SOD123FL
Detailed Description	Diode 20 V 1A Surface Mount SOD-123FL

This model SM5817PL-TP is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

SM5817PL-TP

Series:

-

Technology:

Schottky

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Capacitance @ Vr, F:

110pF @ 4V, 1MHz

Package / Case:

SOD-123F

Operating Temperature - Junction:

-65°C ~ 125°C

Manufacturer:

Micro Commercial Co

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

20 V

Voltage - Forward (Vf) (Max) @ If:

450 mV @ 1 A

Current - Reverse Leakage @ Vr:

100 µA @ 20 V

Mounting Type:

Surface Mount

Supplier Device Package:

SOD-123FL

Base Product Number:

SM5817

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Features

- Halogen Free. "Green" Device (Note 1)
- High Current Capability
- Low Profile Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

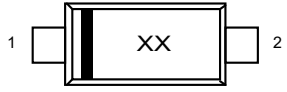

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value			Unit
		SM5817PL	SM5818PL	SM5819PL	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	V_{RMS}	14	21	28	V
Average Rectified Forward Current	$I_{F(AV)}$	1			A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	30			A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	3.735			A^2s

Marking Code

Part Number	Marking Code
SM5817PL	K2
SM5818PL	K3
SM5819PL	K4

Internal Structure

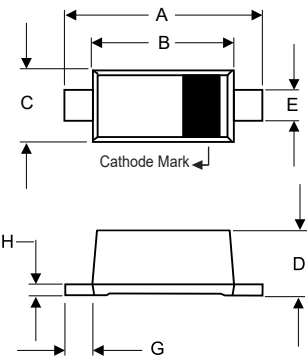
Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 <p>XX = Marking code</p>	
2	Anode		

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High temperature solder exemption applied, see EU directive annex 7a.

1 Amp
Gi fZUW'Ac i bh
GW ch_mIF YWjZyF
20 to 40 Volts

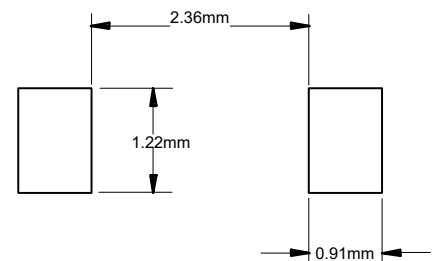
SOD-123FL



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.130	0.152	3.30	3.85	
B	0.100	0.122	2.55	3.10	
C	0.055	0.075	1.40	1.90	
D	0.035	0.053	0.90	1.35	
E	0.020	0.041	0.50	1.05	
G	0.010	----	0.25	----	
H	----	0.010	----	0.25	

SUGGESTED SOLDER PAD LAYOUT



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		125	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		30		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		88		°C/W

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage SM5817PL SM5818PL~SM5819PL	V_F	$I_F=1A; T_J=25^\circ C$			0.45 0.53	V
Reverse Current	I_R	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=100^\circ C$			0.05 9	mA
Junction Capacitance SM5817PL SM5818PL~SM5819PL	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		75 50		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

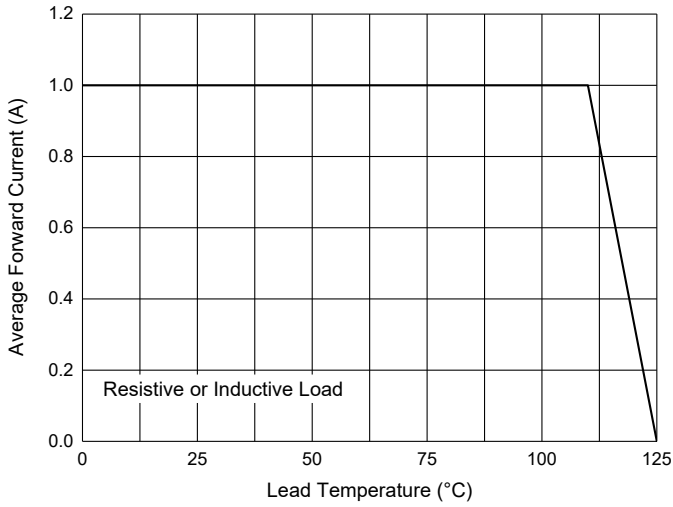


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

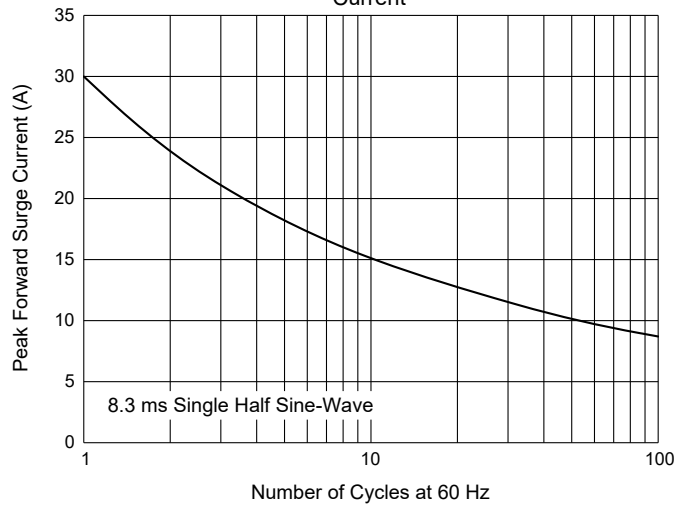


Fig. 3 - Typical Forward Characteristics

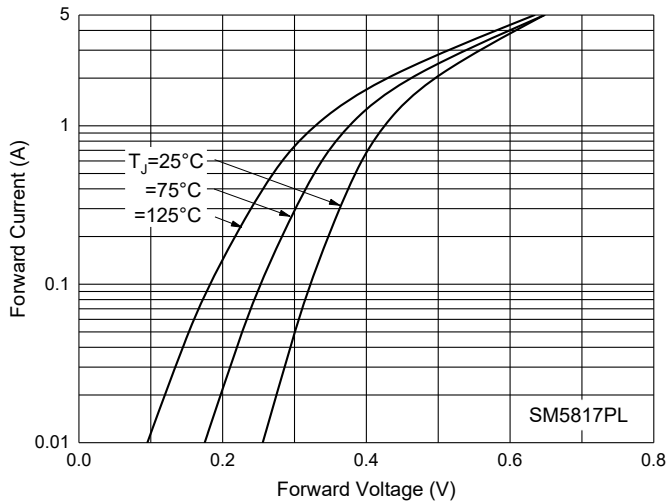


Fig. 4 - Typical Forward Characteristics

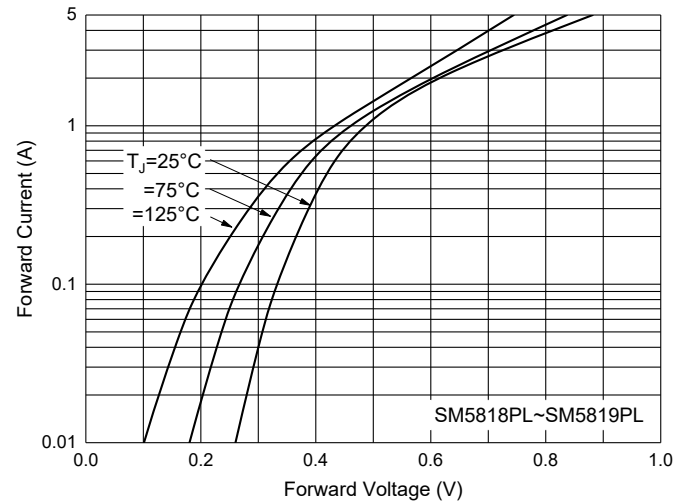


Fig. 5 - Typical Reverse Leakage Characteristics

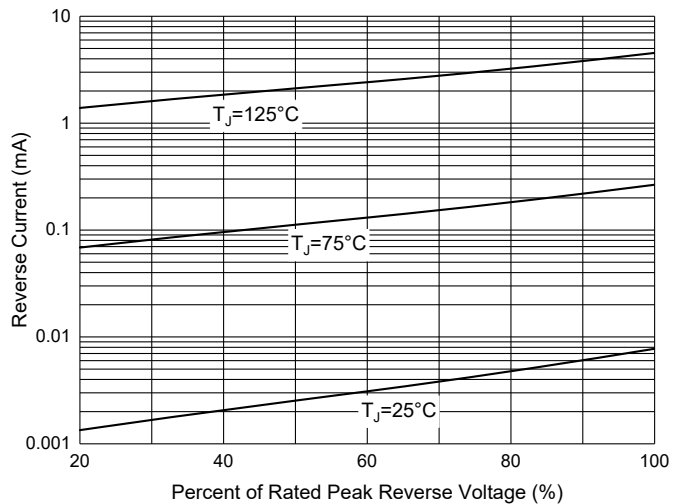
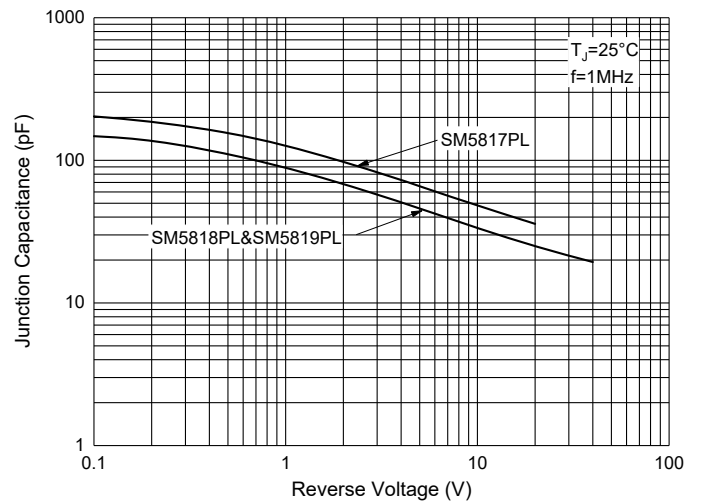


Fig. 6 - Typical Capacitance Characteristics



Ordering Information

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

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