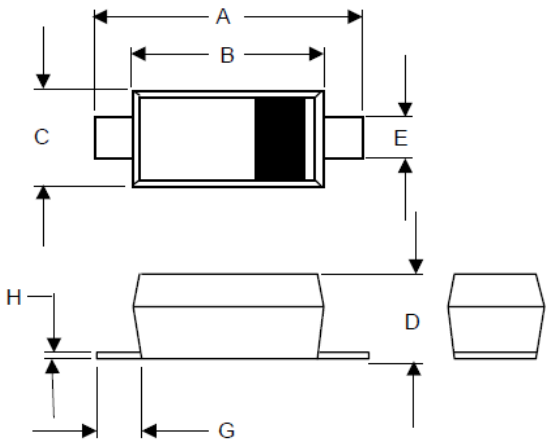
Central Plate Electronics Co., Ltd.

GPP SURFACE MOUNT FAST RECOVERY RECTIFIER
FF1AS THRU FF1MS 50 to 1000 V 1.0 A

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	

FEATURES

- For Surface Mount Applications
- Low Power Loss, High Efficiency
- High Temp Soldering: 260℃ for 10 Seconds At Terminals
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1)("P"Suffix designates Compliant. See ordering information)
- Welding Iron Temp:350℃ for 3s max.
- Storage Condition: Less than 30℃,RH<70%

MECHANICAL DATA

- Case:SOD-123S,Molded Plastic over passivated junction
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.01 gra

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, Resistive or inductive load. For capacitive load, derate current by 20%

Type Number	Symbols	SFM1 1PL	SFM1 2PL	SFM1 3PL	SFM1 4PL	SFM1 5PL	SFM1 6PL	SFM1 7PL	SFM1 8PL	Units
Device Marking		S1	S2	S3	S4	S5	S6	S7	S8	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V_{RMS}	35	75	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current. 375" (9.5mm) Lead Length @ T_A =55℃	$I_{F(AV)}$	1.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30								Amp
Maximum Forward Voltage @1.0A	V_F	0.95				1.25		1.70		Volts
Maximum Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage@T_A=125℃	I_R	5.0 150								uAmp
Maximum Reverse Recovery Time (Note1)	T_{RR}	35								nS
Typical Junction Capacitance (Note 2)	C_J	10								pF
Maximum Thermal Resistance (Note 3)	RθJA	75								℃/W
Operating Temperature Range TJ	TJ	-55 to +150								℃
Storage Temperature Range TSTG	TSTG	-55 to +150								℃

NOTES:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A。
2. Pulse test: 300u pulse width, 1% duty cycle。
3. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

RATINGS AND CHARACTERISTIC CURVES (FF1AS THRU FF1MS)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

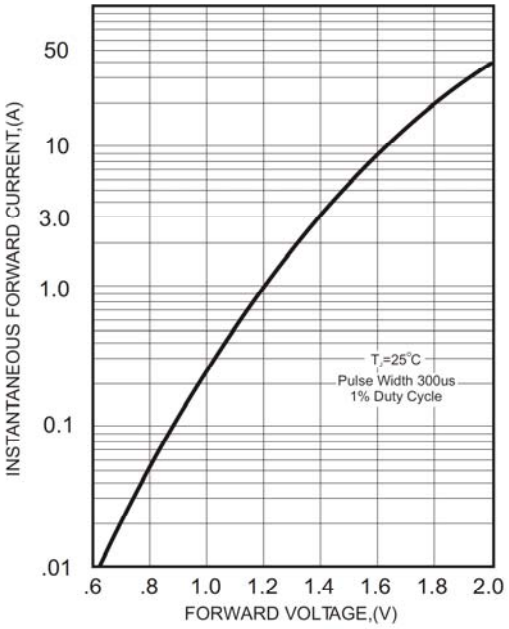


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

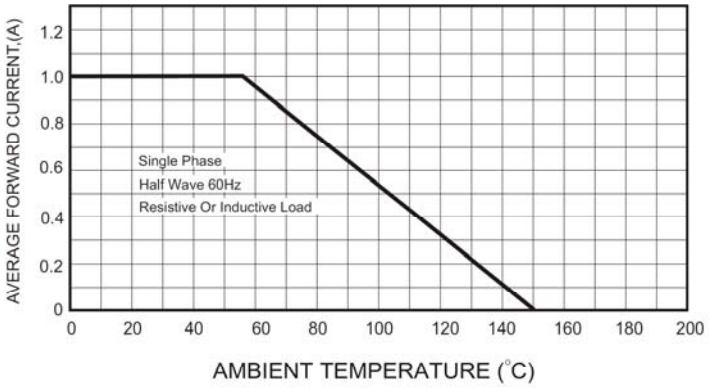
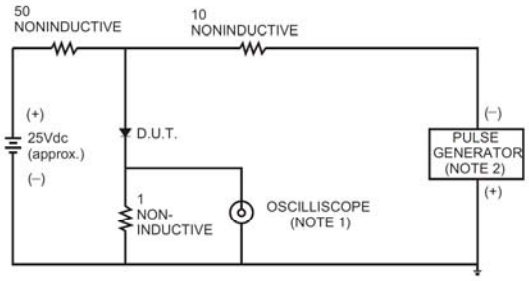
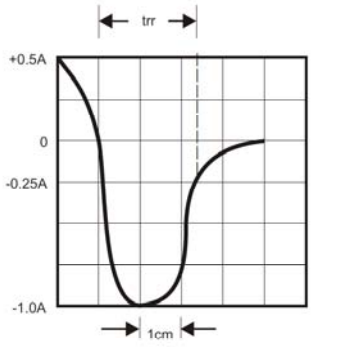


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.



SET TIME BASE FOR
50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

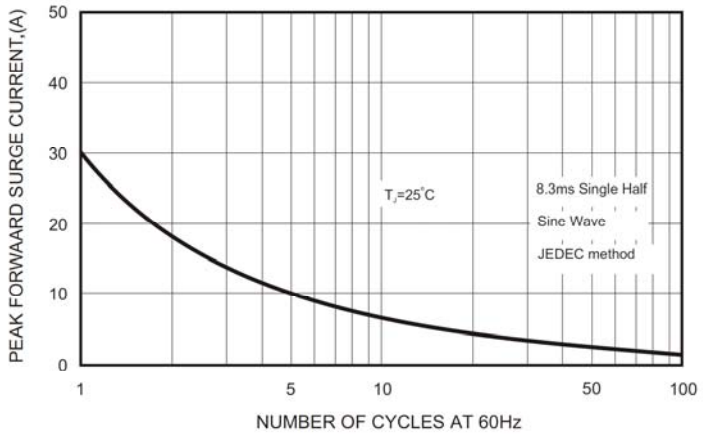


FIG.5-TYPICAL JUNCTION CAPACITANCE