

Descriptions

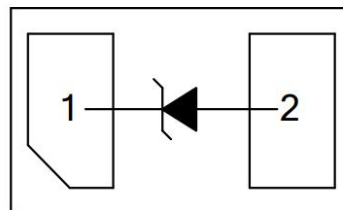
The SP10P882A15P01 is low leakage current, insertion loss in SOD-882 package that designed to protect voltage sensitive components of high frequency line from over-voltage caused by ESD, EFT. The device will meet IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements.



Features

- ◆ 1000W Peak power dissipation under 8/20 μ s waveform
- ◆ IEC 61000-4-2 (ESD): ± 30 KV (Contact), ± 30 KV (Air)
- ◆ IEC 61000-4-4 (EFT): 40A (5/50ns)
- ◆ SOD-882 surface mount package
- ◆ Lower leakage current
- ◆ Excellent clamping voltages
- ◆ Solid-state silicon avalanche technology
- ◆ Solder reflow temperature: Pure Tin-Sn, 260-270 $^{\circ}$ C
- ◆ Plastic package has underwriters laboratory flammability 94V-0
- ◆ Meet Lead Free/RoHS compliant

Schematic



Applications

- ◆ Computer
- ◆ Mobile Phones and Accessories
- ◆ Digital Cameras
- ◆ Personal Digital Assistants

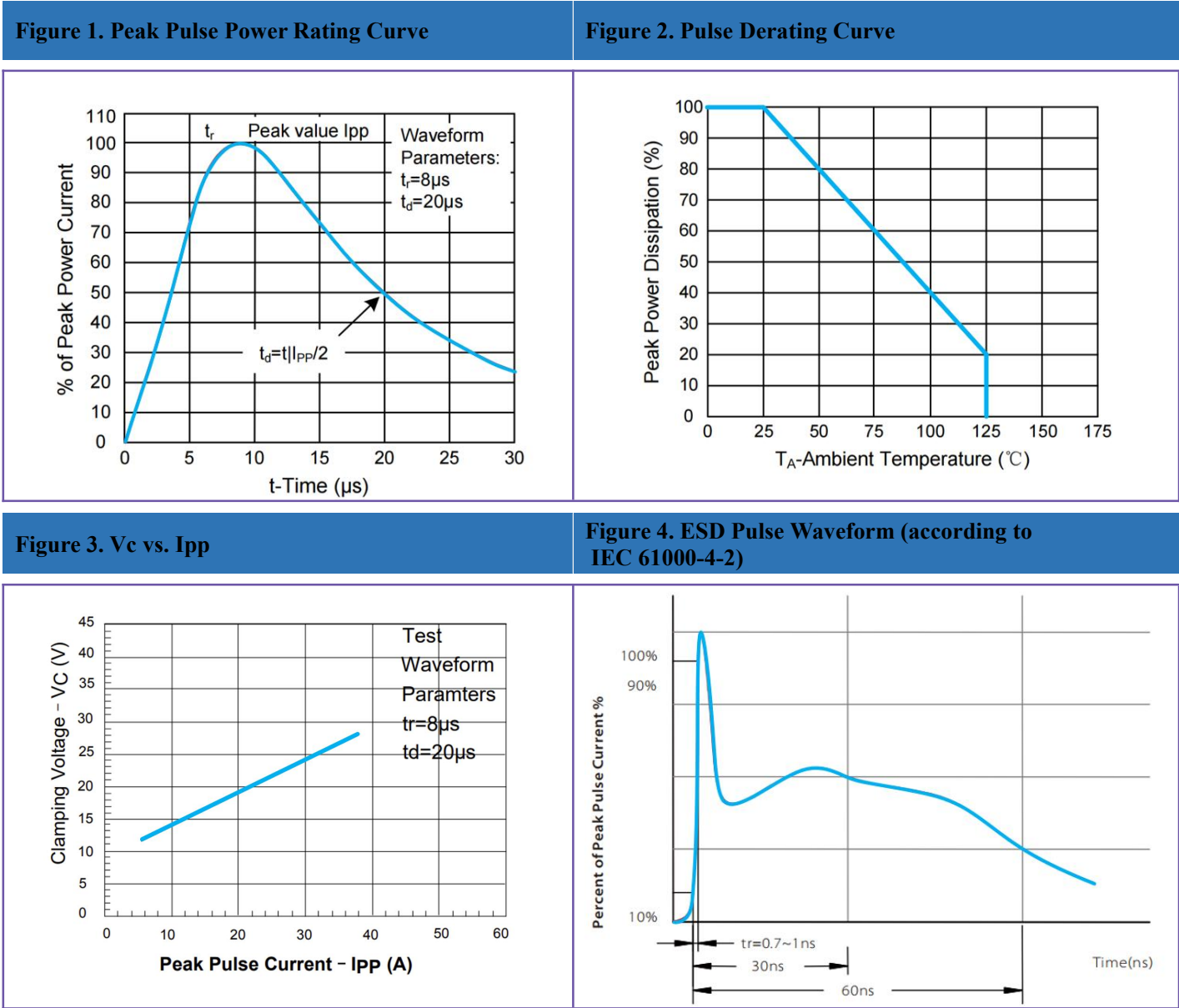
Maximum Ratings($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)

Rating	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PPM}	1000	W
ESD voltage (Contact discharge)	V_{ESD}	± 30	KV
ESD voltage (Air discharge)		± 30	
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

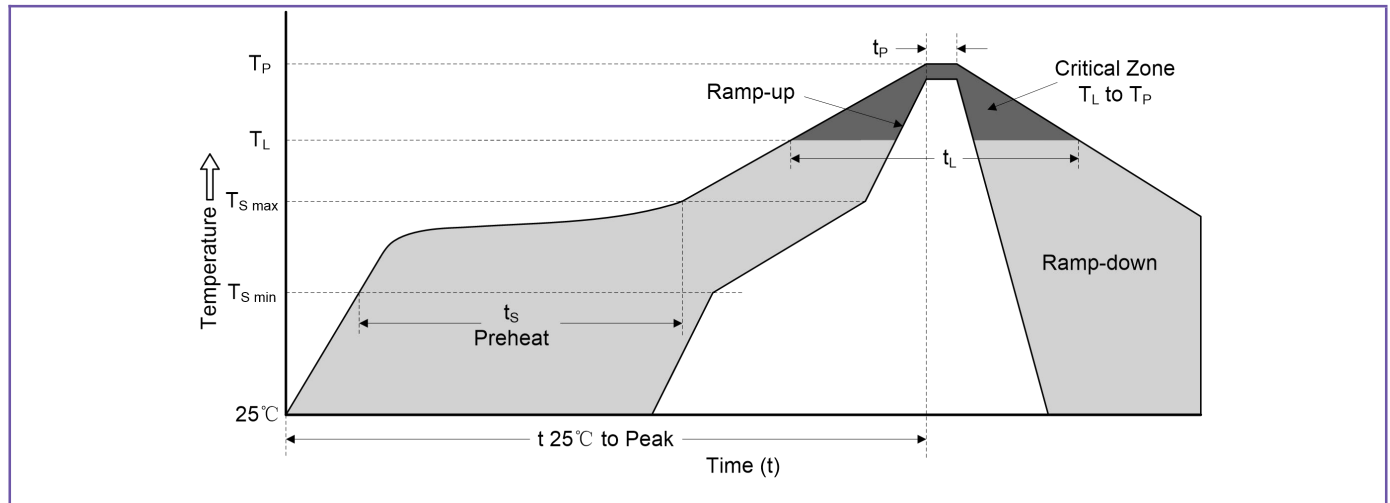
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				15.0	V
Reverse breakdown voltage	V_{BR}	$I_T=1.0\text{mA}$	16.7			V
Reverse leakage current	I_R	$V_R=15.0\text{V}$			1	μA
Clamping voltage ($t_p=8/20\mu\text{s}$)	V_C	$I_{PP}=38\text{A}$		28		V
Peak Pulse Current($t_p=8/20\mu\text{s}$)	I_{PP}				38	A
Off state junction capacitance	C_J	0V dc, $f=1\text{MHz}$		90		pF

Typical Characteristic Curves (T_A=25℃ unless otherwise noted)



Reflow Soldering Parameters

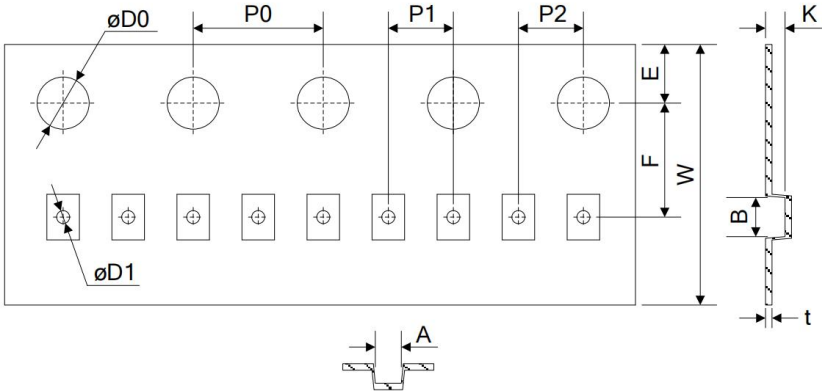
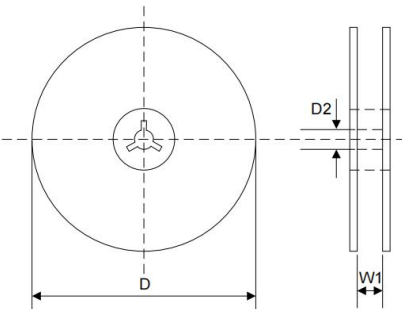


Reflow Condition		Lead-free Assembly
Preheat	-Temperature Min ($T_{S\ min}$)	150°C
	-Temperature Max ($T_{S\ max}$)	200°C
	-Time (min to max) (t_s)	60-180 seconds
Average ramp-up rate (T_L to T_P)		3°C/second max.
$T_{S\ max}$ to T_L -Ramp-up Rate		3°C/second max.
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Time (min to max) (t_p)	60-150 seconds
Peak Temperature (T_P)		260(+0/-5)°C
Time within 5°C of actual Peak Temperature (t_P)		20-40 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to Peak Temperature(T_P)		8 minutes max.
Do not exceed		260°C

Dimensions (SOD-882)

Symbol	Dimension			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.95	1.05	0.037	0.041
B	0.55	0.65	0.022	0.026
C	0.32	0.55	0.013	0.022
D	0.45		0.018	
E	0.20	0.30	0.008	0.012
F	0.45	0.55	0.018	0.022

Packaging

Tape		Symbol	Dimension (mm)
		W	8.00±0.30
		P0	4.00±0.10
		P1	2.00±0.10
		P2	2.00±0.10
		D0	Φ1.55±0.10
		D1	Φ0.40±0.05
		E	1.75±0.10
		F	3.50±0.10
		A	0.75±0.10
		B	1.15±0.10
		K	0.60±0.05
		t	0.20±0.05
Reel		D	Φ328.0±2.0
		D2	Φ14.4
		W1	10.0
		Quantity: 40000PCS	