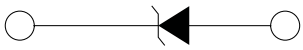
Features

- For surface mounted applications
- Low-profile package
- Ideal for automated placement
- Available in Unidirectional and Bidirectional
- 3000W peak pulse power capability with a 10/1000μs waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 260 °C/10 s at terminals



SMD
(JEDEC DO-214AB)



Bidirectional

Typical Applications

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, telecommunication.

Maximum Ratings and Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Power Dissipation(Fig.2)- with a 10/1000μs waveform	P_{PPM}	3000	W
Peak Power Dissipation on Infinite Heat Sink at T_L=50°C	P_D	6.5	W
Peak Forward Surge Current,8.3ms single half sinewave superimposed on rated load (JEDEC Method)	I_{FSM}	200	A
Maximum Instantaneous Forward Voltage at 100A for Unidirectional Only	V_F	3.5	V
Operating Temperature Range	T_J	-65 to 150	°C
Storage Temperature Range	T_{STG}	-65 to 175	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	15	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75	°C/W

Notes

1. Measured of 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

Electrical characteristics, parameter values (T_{amb} = 25 °C)

Part	V_{RWM}	IR@V_R	V_{BR} @I_T		I_T	V_C@I_{PP}	I_{PP}①
	max(V)	μA	min(V)	max(V)	mA	max(V)	A
SMD30J58V	58.0	1.0	64.4	71.2	1.0	93.6	31.2

① Surge waveform: 10/1000μs

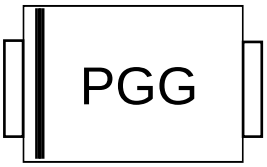
V_R ： Stand-off Voltage -- Maximum voltage that can be applied

V_{BR}： Breakdown Voltage

V_C：Clamping Voltage -- Peak voltage measured across the suppressor at a specified Ipp

I_R： Reverse Leakage Current

Marking codes

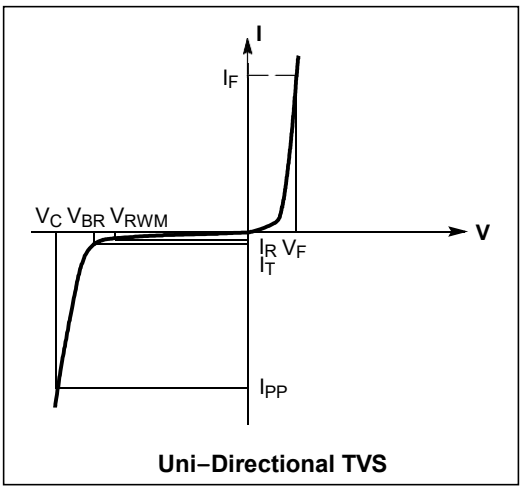


Note

(1)"PGG" is device code,fixed.

I-V Curve Characteristics

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F



Uni−Directional TVS

Performance Curve for Reference(T_A=25°C unless otherwise noted)

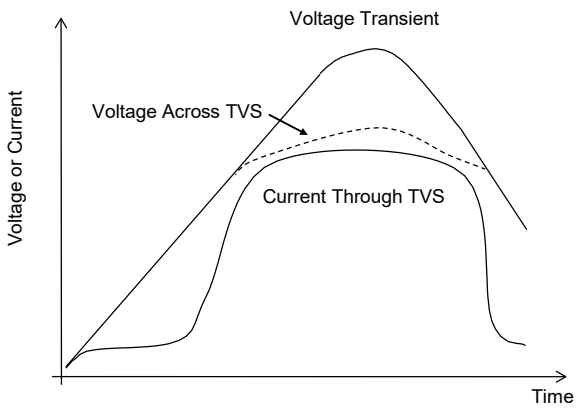


Fig.1 TVS Transients Clamping Waveform

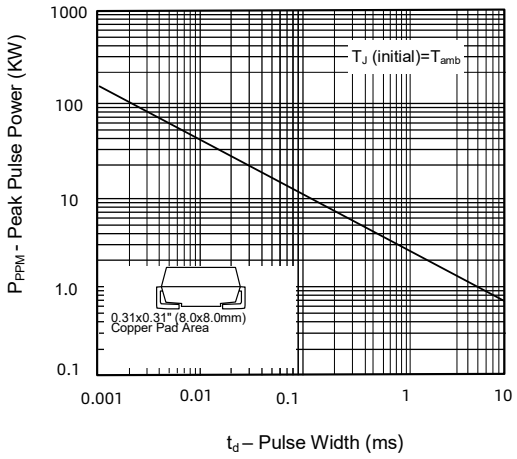


Fig.2 Peak Pulse Power Rating Curve

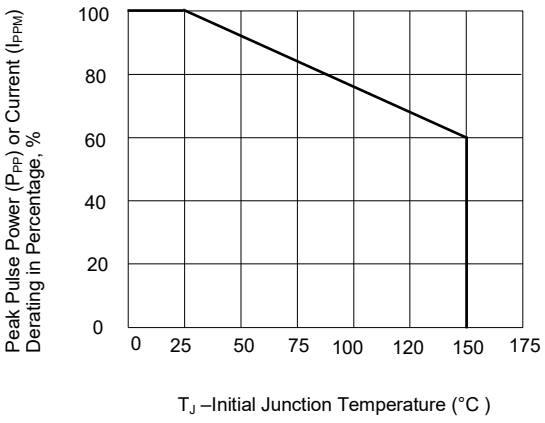


Fig.3 Peak Pulse Power Derating Curve

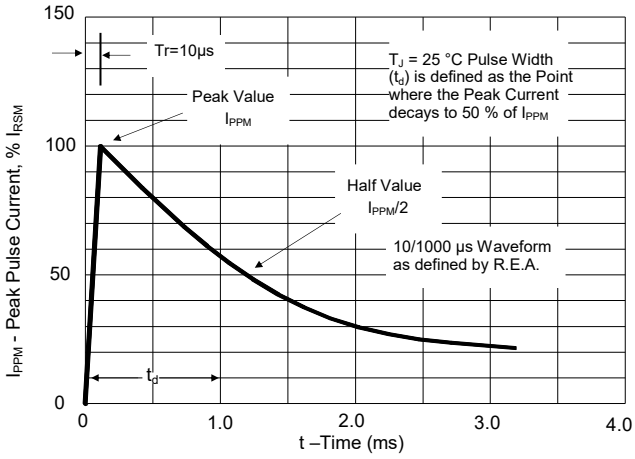


Fig.4 Pulse Waveform

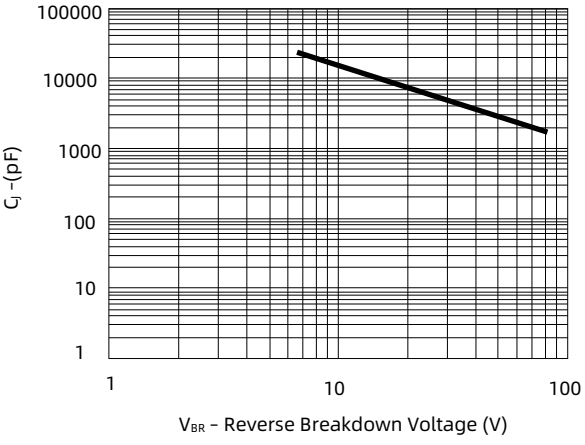


Fig.5 Typical Junction Capacitance

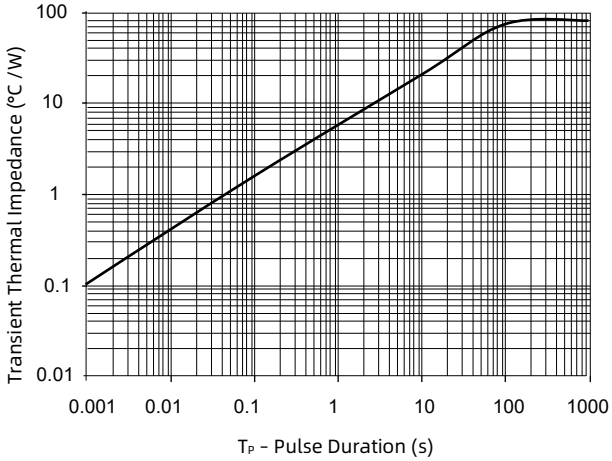


Fig.6 Typical Transient Thermal Impedance

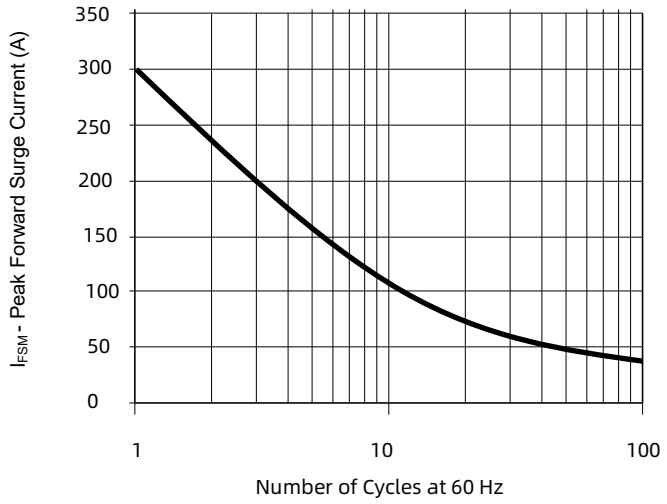


Fig.7 Maximum Non-Repetitive Forward Surge Current
Uni-Directional only

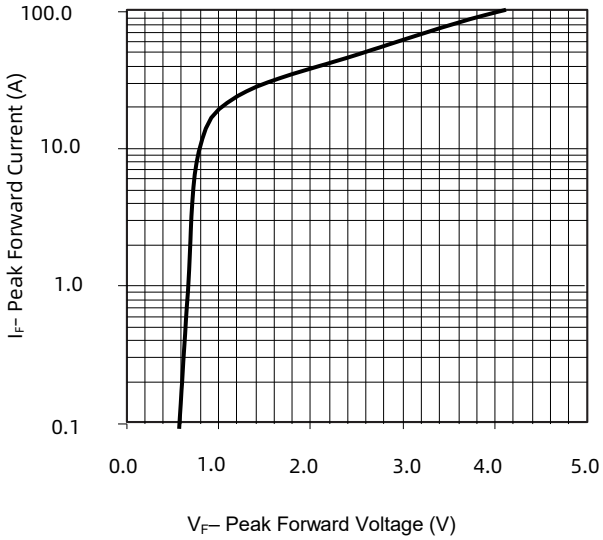
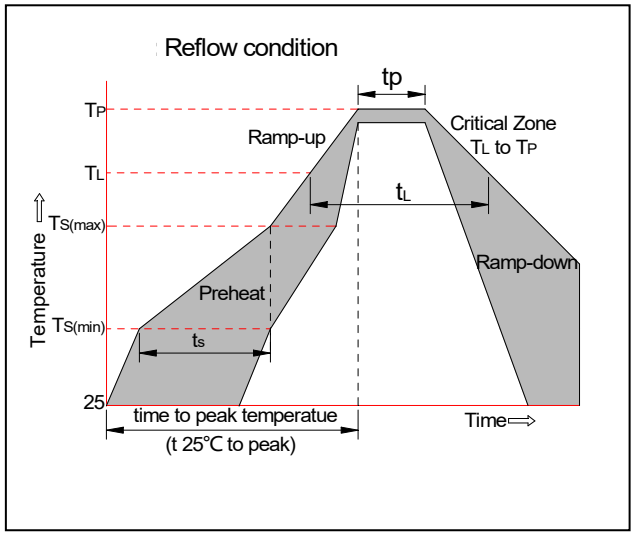


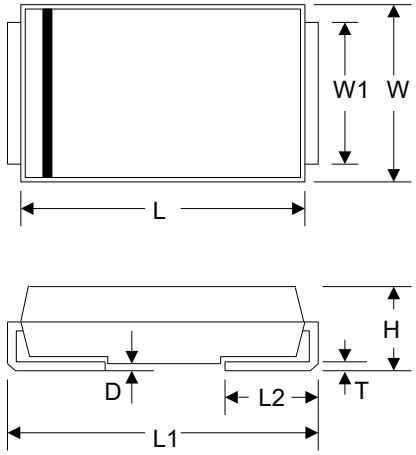
Fig.8 Peak Forward Drop vs Peak Forward Current
(Typical Values)

Soldering Parameters

Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃



Package Outline Dimensions (DO-214AB)



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
L	6.600	7.110	0.260	0.280
W	5.590	6.220	0.220	0.245
W1	2.900	3.200	0.114	0.126
H	2.060	2.620	0.079	0.103
T	0.1520	0.305	0.006	0.012
L1	7.750	8.130	0.305	0.320
L2	0.760	1.520	0.030	0.060
D	-	0.203	-	0.008

Recommened Mounting Pad Layout Unit:mm

