

## Excellent Integrated System Limited

Stocking Distributor

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[Diodes Incorporated](#)  
[SMBJ350A-13-F](#)

For any questions, you can email us directly:

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**SMBJ350A**

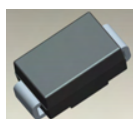
**600W SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR**

**Features**

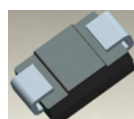
- 600W Peak Pulse Power Dissipation
- 350V Standoff Voltage
- Glass Passivated Die Construction
- Excellent Clamping Capability
- Fast Response Time
- **Lead Free Finish/RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 2)**

**Mechanical Data**

- Case: SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band
- Weight: 0.1 grams (approximate)



Top View



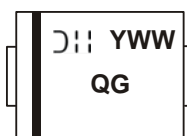
Bottom View

**Ordering Information** (Note 3)

Part Number	Qualification	Case	Packaging
SMBJ350A-13-F	Commercial	SMB	3000/Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes
  2. Diodes Inc.'s "Green" Policy can be found on our website at <http://www.diodes.com>.
  3. For packaging details, go to our website at <http://www.diodes.com>.

**Marking Information**



QG = Product type marking code (See Page 2)  
 ☺ = Manufacturers' code marking  
 YWW = Date code marking  
 Y = Last digit of year (ex: 1 for 2011)  
 WW = Week code (01 ~ 53)

NEW PRODUCT



**SMBJ350A**

**Maximum Ratings** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T <sub>A</sub> = 25° C) (Note 4)	P <sub>PK</sub>	600	W
Peak Power Derating Above 25°C	P <sub>der</sub>	4.8	W/°C
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (Notes 4 & 5)	I <sub>FSM</sub>	100	A
Steady State Power Dissipation @ T <sub>L</sub> = 75°C	PM(AV)	5.0	W
Instantaneous Forward Voltage @ I <sub>PP</sub> = 35A (Notes 4 & 5)	V <sub>F</sub>	5.0	V

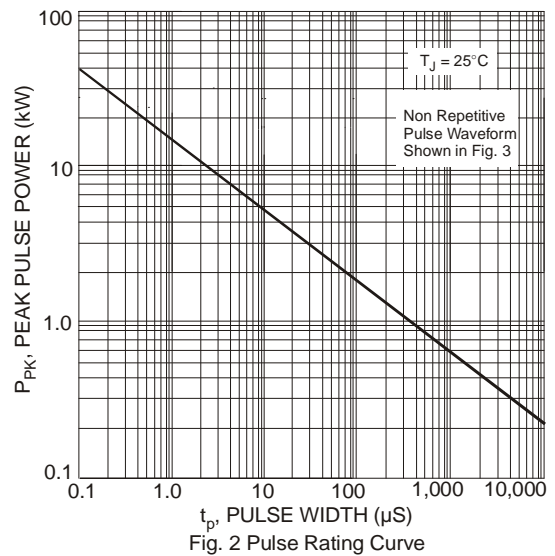
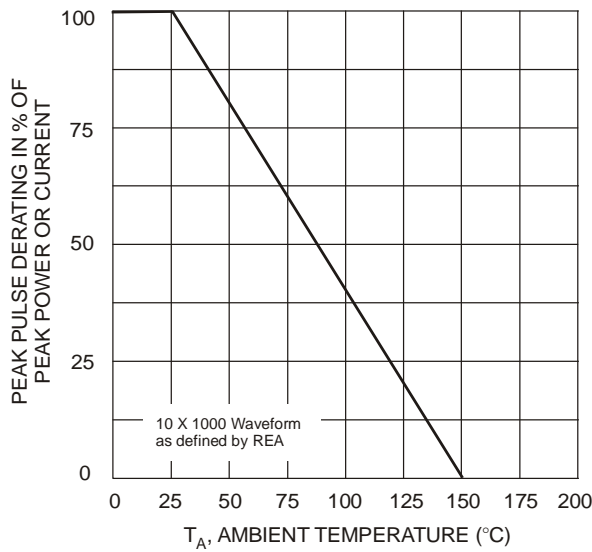
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +175	°C

**Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Part Number	Reverse Standoff Voltage	Breakdown Voltage V <sub>BR</sub> @ I <sub>T</sub> (Note 6)		Test Current I <sub>T</sub> (mA)	Max. Reverse Leakage @ V <sub>RWM</sub> I <sub>R</sub> (µA)	Max. Clamping Voltage @ I <sub>PP</sub> V <sub>C</sub> (V)	Max. Peak Pulse Current I <sub>PP</sub> (A)	Marking Code
		Min (V)	Max (V)					
See Note 5	V <sub>RWM</sub> (V)	Min (V)	Max (V)	I <sub>T</sub> (mA)	I <sub>R</sub> (µA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	-
SMBJ350A	350.0	391.0	432.0	1.0	5.0	567.0	1.1	QG

- Notes: 4. Valid provided that terminals are kept at ambient temperature.  
 5. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.  
 6. V<sub>BR</sub> measured with I<sub>T</sub> current pulse = 300µs



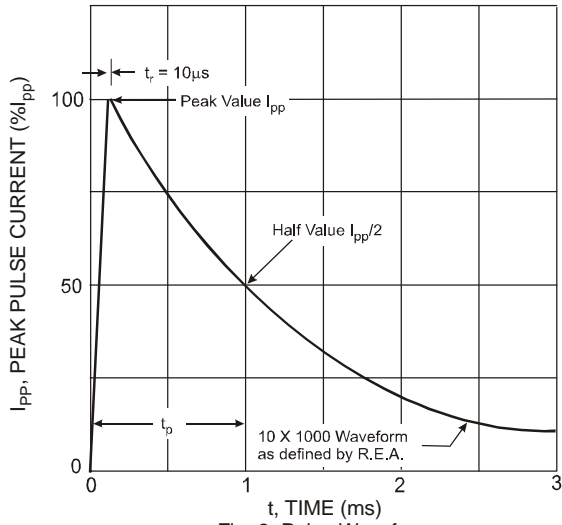


Fig. 3 Pulse Waveform

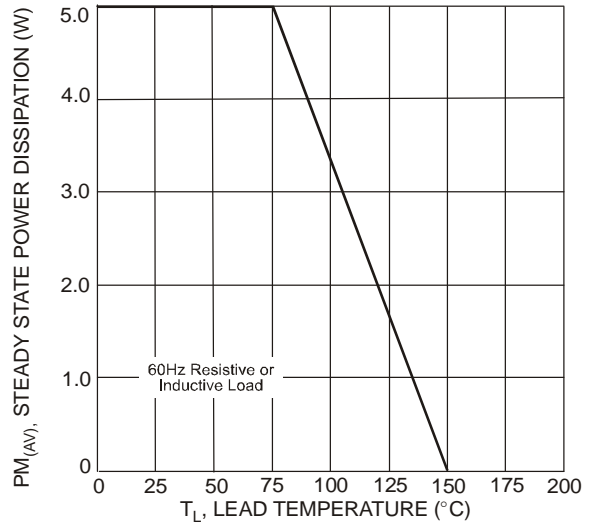
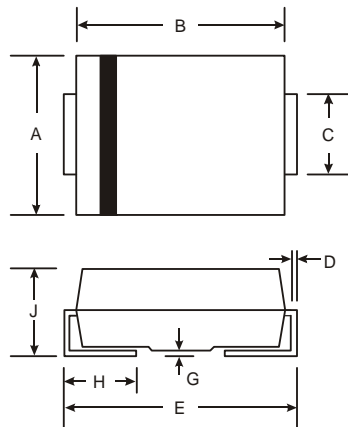


Fig. 4 Steady State Power Derating Curve

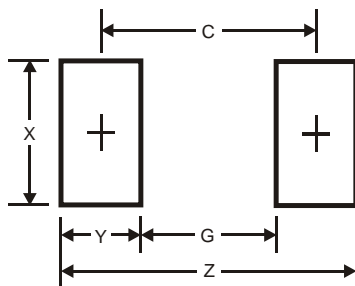
NEW PRODUCT

**Package Outline Dimensions**



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

**Suggested Pad Layout**



Dimensions	Value (in mm)
Z	6.8
G	1.8
X	2.3
Y	2.5
C	4.3



SMBJ350A

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