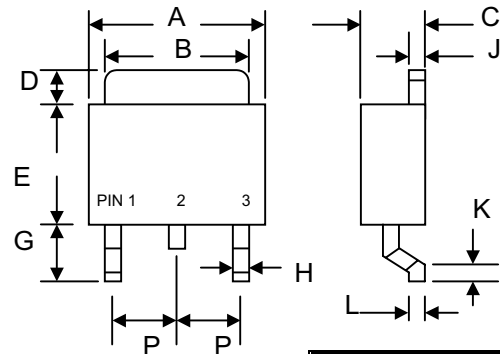


Data Sheet 2836, Rev. -

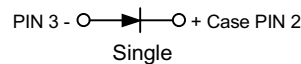
**Features**

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



**Mechanical Data**

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band
- Weight: 0.4 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Standard Packaging: 16mm Tape (EIA-481)



D-PAK/TO-252AA				
Dim	Min	Max	Min	Max
A	6.40	6.80	0.252	0.268
B	5.00	5.40	0.197	0.213
C	2.35	2.75	0.093	0.108
D	—	1.60	—	0.063
E	5.30	5.70	0.209	0.224
G	2.30	2.70	0.091	0.106
H	0.40	0.80	0.016	0.031
J	0.40	0.60	0.016	0.024
K	0.30	0.70	0.012	0.028
L	0.50 Typical		0.020 Typical	
P	—	2.30	—	0.091
			<b>In mm</b>	<b>In inch</b>

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

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SD 520S	SD 530S	SD 540S	SD 550S	SD 560S	SD 580S	SD 5100S	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								V
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	30	40	50	60	80	100	
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	35	42	56	70	V
Average Rectified Output Current @T <sub>L</sub> = 75°C	I <sub>o</sub>	5.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	100							A
Forward Voltage (Note 1) @I <sub>F</sub> = 5.0A	V <sub>FM</sub>	0.55		0.75		0.85		V	
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	0.2 20							mA
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	400							pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	50							K/W
Operating Temperature Range	T <sub>j</sub>	-50 to +125							°C
Storage Temperature Range	T <sub>STG</sub>	-50 to +150							°C

Note: 1. Mounted on P.C. Board with 14mm<sup>2</sup> (0.13mm thick) copper pad.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Data Sheet 2836, Rev. -

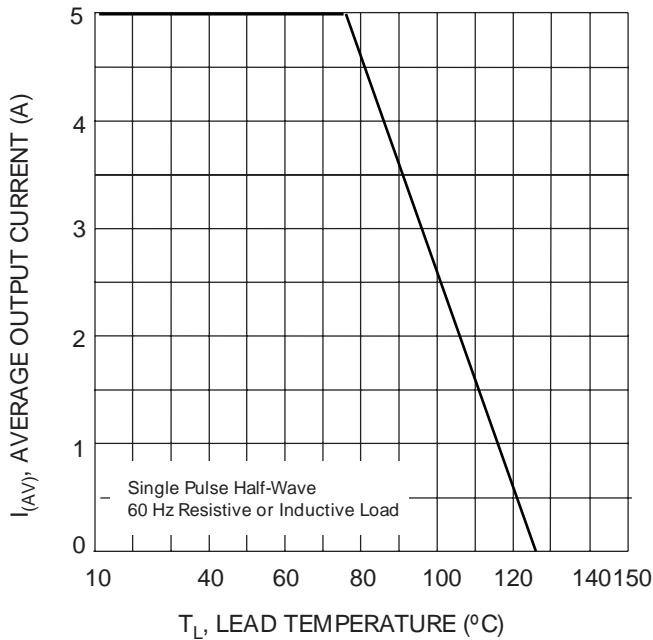


Fig. 1 Forward Current Derating Curve

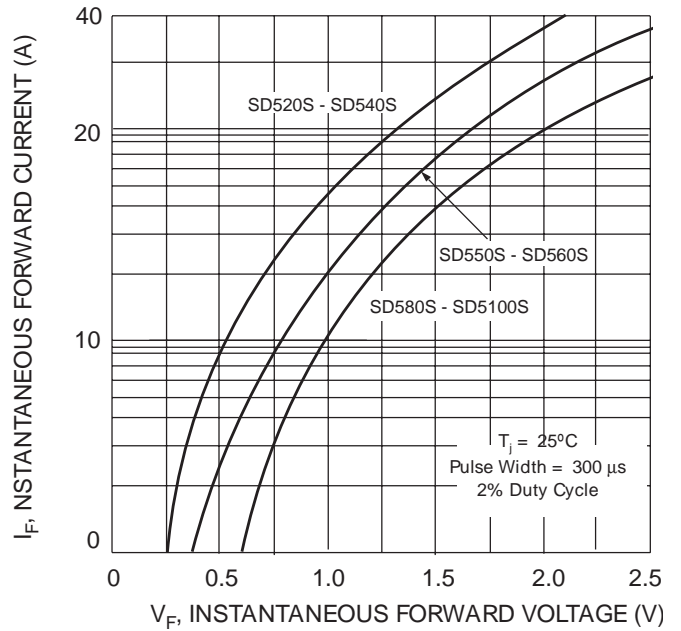


Fig. 2 Typical Forward Characteristics

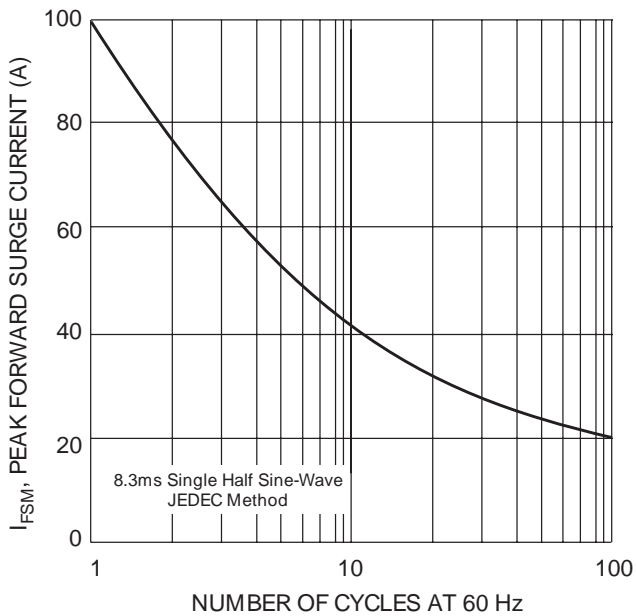


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

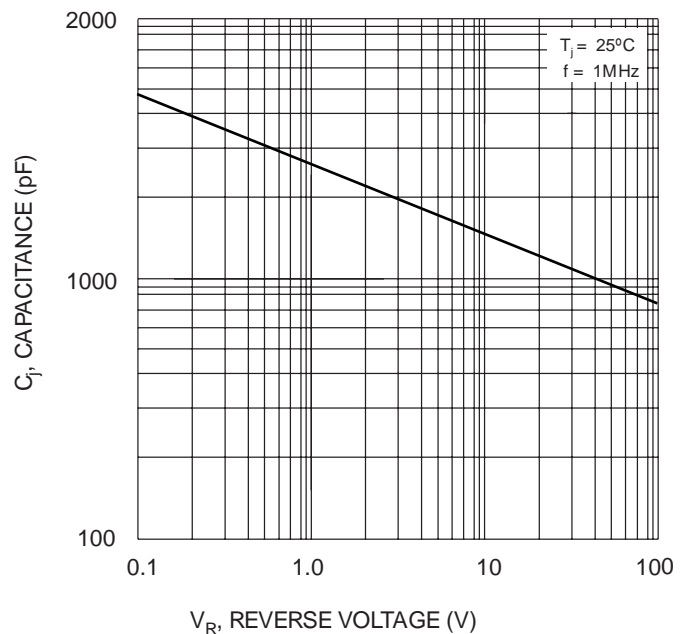


Fig. 4 Typical Junction Capacitance