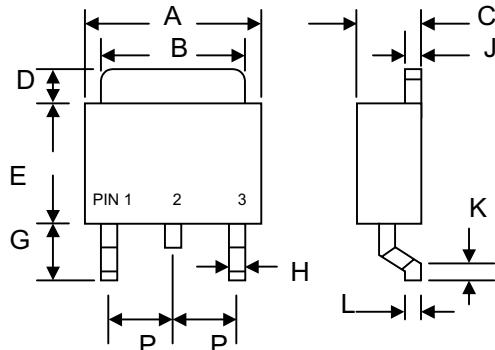


Date Sheet 2840, Rev.-

## 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)

PIN 3 - O → O + Case PIN 2  
Single

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

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$  unless otherwise specified

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

Characteristic	Symbol	SD 820S	SD 830S	SD 840S	SD 850S	SD 860S	SD 880S	SD 8100S	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>	20	30	40	50	60	80	100	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	35	42	56	70	V
Average Rectified Output Current @ $T_L = 85^\circ\text{C}$	I <sub>o</sub>				8.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>					85			A
Forward Voltage (Note 1) @ $I_F = 8.0\text{A}$	V <sub>FM</sub>		0.65		0.75		0.85		V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I <sub>RM</sub>				0.2				mA
					20				
Typical Junction Capacitance (Note 2)	C <sub>j</sub>			400					pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>			60					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 2840, Rev. -

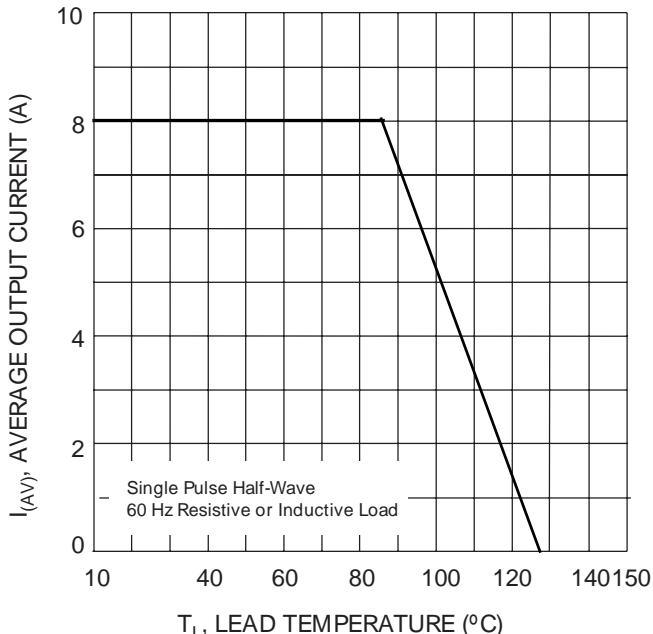


Fig. 1 Forward Current Derating Curve

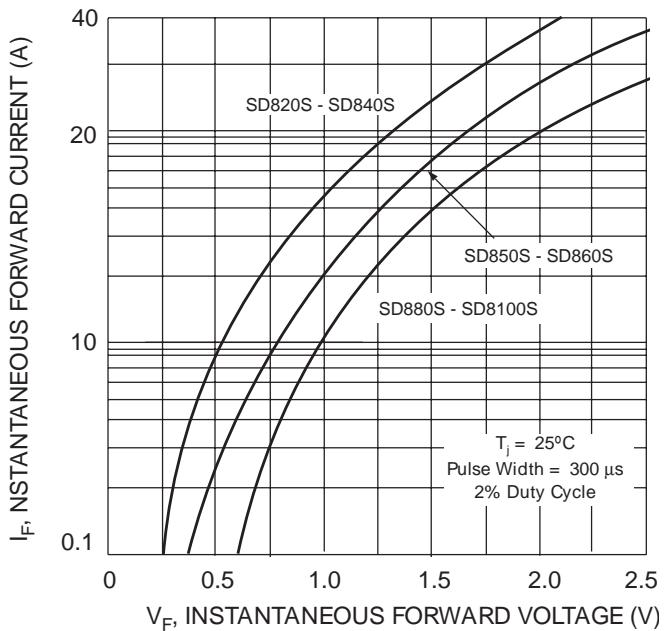


Fig. 2 Typical Forward Characteristics

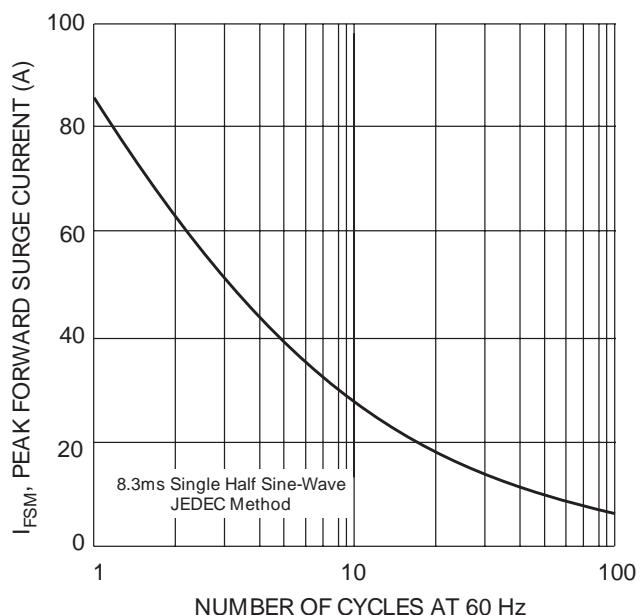


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

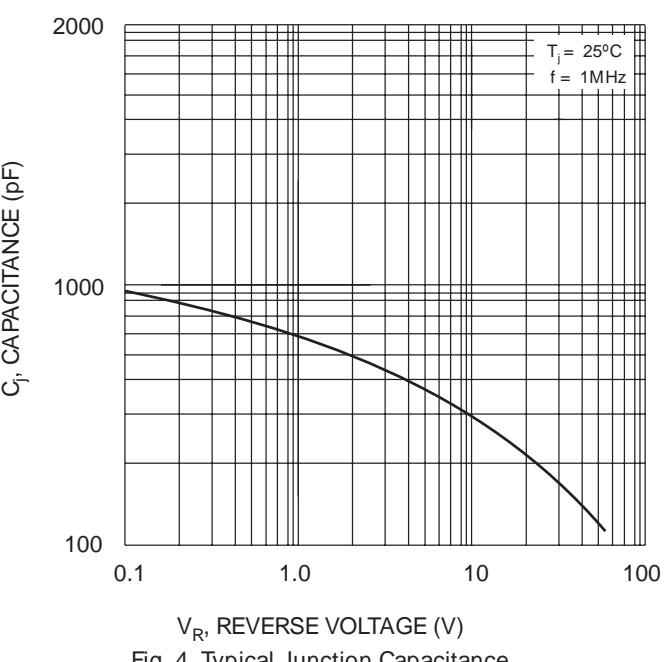


Fig. 4 Typical Junction Capacitance