

# Schottky Barrier Rectifier

# SDT20B100D1

## FEATURES

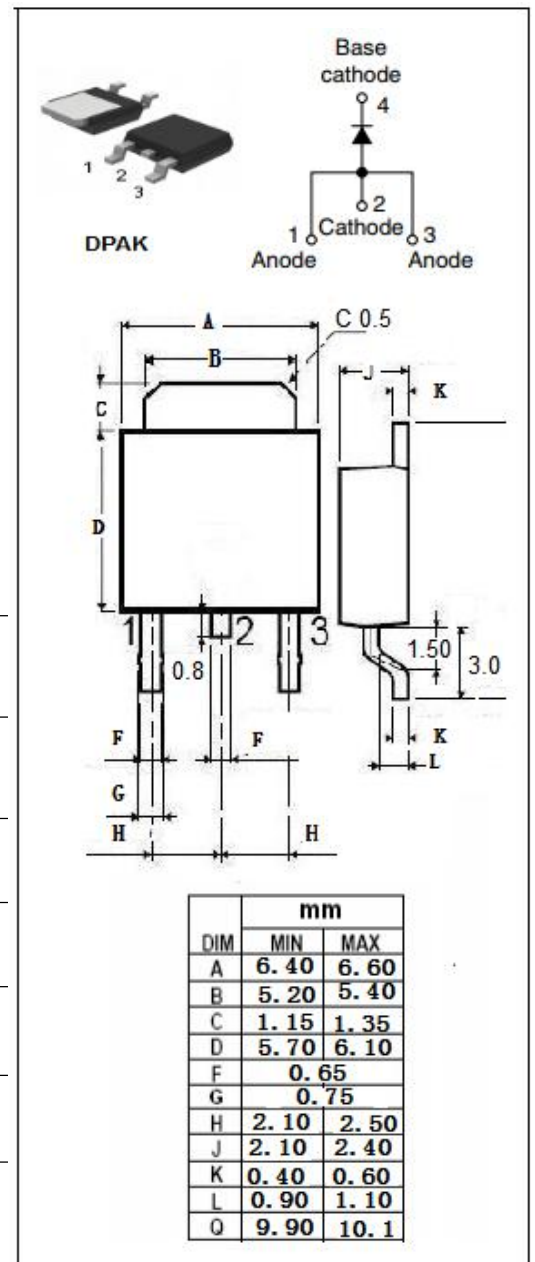
- Low Forward Voltage
- High Operating Junction Temperature
- Extremely low reverse leakage
- Optimized VF vs. IR trade off for high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- High frequency switching
- High efficiency SMPS
- Automotive

## ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage DC Blocking Voltage	100	V
I <sub>F(AV)</sub>	Average Rectified Forward Current (Rated V <sub>R</sub> ) T <sub>C</sub> = 135°C	20	A
I <sub>FSM</sub>	Non-repetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	100	A
T <sub>J</sub>	Junction Temperature	-55~175	°C
T <sub>stg</sub>	Storage Temperature Range	-55~175	°C



**Schottky Barrier Rectifier**
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**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300us, Duty Cycle $\leq$ 2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=5A; T_C=25^{\circ}C$	0.57	V
		$I_F=5A; T_C=125^{\circ}C$	0.50	
		$I_F=10A; T_C=25^{\circ}C$	0.66	
		$I_F=10A; T_C=125^{\circ}C$	0.82	
		$I_F=20A; T_C=25^{\circ}C$	0.82	
		$I_F=20A; T_C=125^{\circ}C$	0.75	
$I_R$	Maximum Instantaneous Reverse Current	$V_r=100V; T_j=25^{\circ}C$ $V_r=100V; T_j=125^{\circ}C$	0.1 16	mA

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