

Schottky Barrier Rectifier

SDT30B100D1

FEATURES

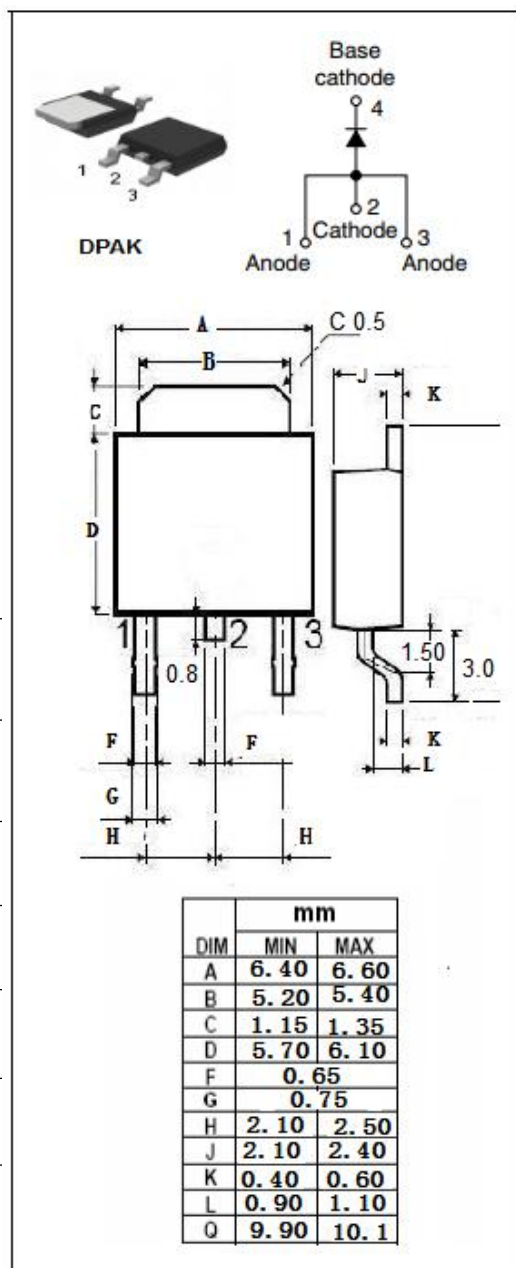
- Low Forward Voltage
- High Operating Junction Temperature
- Extremely low reverse leakage
- Optimized VF vs. IR trade off for high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High frequency switching
- High efficiency SMPS
- Automotive

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _R	Peak Repetitive Reverse Voltage DC Blocking Voltage	100	V
I _{F(AV)}	Average Rectified Forward Current (Rated V _R) T _C = 135°C	30	A
I _{FSM}	Non-repetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	130	A
T _J	Junction Temperature	-55~175	°C
T _{stg}	Storage Temperature Range	-55~175	°C



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2	°C/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300us, Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 5A ; T_C = 25^{\circ}C$	0.54	V
		$I_F = 5A ; T_C = 125^{\circ}C$	0.46	
		$I_F = 10A ; T_C = 25^{\circ}C$	0.61	
		$I_F = 10A ; T_C = 125^{\circ}C$	0.57	
		$I_F = 30A ; T_C = 25^{\circ}C$	0.85	
		$I_F = 30A ; T_C = 125^{\circ}C$	0.79	
I_R	Maximum Instantaneous Reverse Current	$V_r = 100V ; T_j = 25^{\circ}C$ $V_r = 100V ; T_j = 125^{\circ}C$	0.12 20	mA

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