

Ultrafast Rectifier
DSEI12-06A
FEATURES

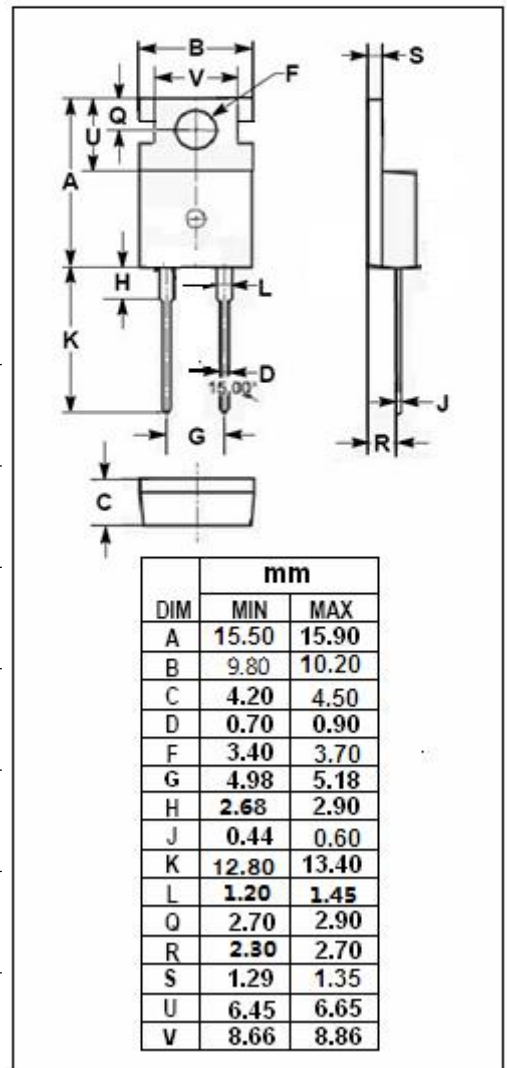
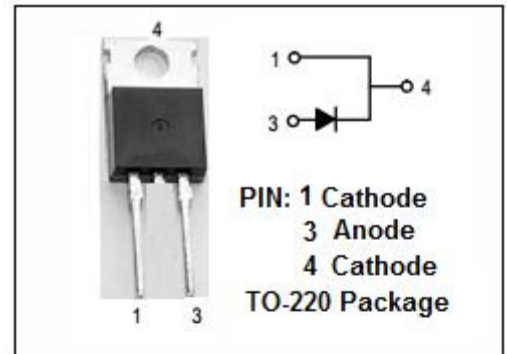
- Ultrafast recovery time
- Popular TO-220 package
- Low forward drop
- Avalanche energy rated
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Rectifiers in switch mode power supplies (SMPS)
- Uninterruptible power supplies (UPS)
- Free wheeling diode in converters and motor control circuits

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RFWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
I _{F(AV)}	Average Rectified Forward Current	14	A
I _{FRM}	Peak Rectified forward current	150	A
I _{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	100	A
T _J	Junction Temperature	-40~150	°C
T _{stg}	Storage Temperature Range	-40~150	°C



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.0	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$) (Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{F^*}	Maximum Instantaneous Forward Voltage	$I_F=14A; T_j=25^{\circ}C$ $I_F=14A; T_j=150^{\circ}C$	1.7 1.5	V
I_{R^*}	Maximum Instantaneous Reverse Current	$V_R=0.8V_{RRM}; T_j=150^{\circ}C$ $V_R=0.8V_{RRM}; T_j=25^{\circ}C$	3000 25	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F=1A; di/dt=50A/\mu s$	50	ns

*:Pulse test ,Pulse width=300us,duty cycle \leq 2%

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