

**Ultra fast Rectifier**

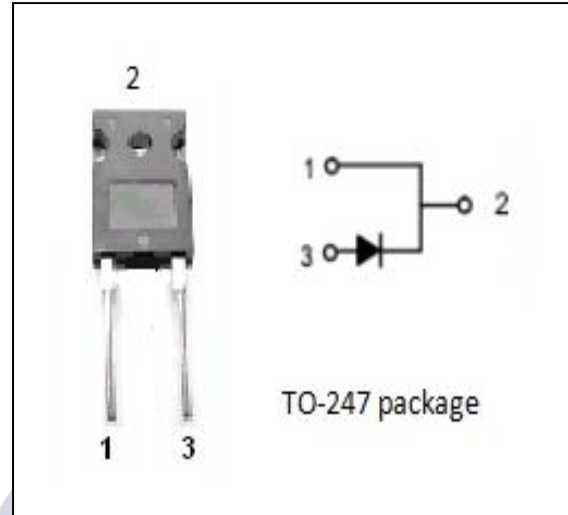
**DSEI60-12A**

**FEATURES**

- With TO-247 packaging
- High performance fast recovery diode
- Low loss and soft recovery
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- Power switching circuits
- General purpose



**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	1200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =90°C	52	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase)@T <sub>c</sub> =45°C	50HZ 60HZ	500 540 A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	189	W
T <sub>J</sub>	Junction Temperature	-40~150	°C
T <sub>stg</sub>	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	0.66	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	35	$^{\circ}C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=60A ; T_j=25^{\circ}C$ $I_F=60A ; T_j=150^{\circ}C$	2.0 2.55	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}C$ $V_R=0.8 * V_{RWM}; T_j=25^{\circ}C$ $V_R=0.8 * V_{RWM}; T_j=125^{\circ}C$	2.2 0.5 14	mA
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1A; diF/dt=-200A/\mu s; V_R=30V$	60	ns

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