

Ultra fast Rectifier

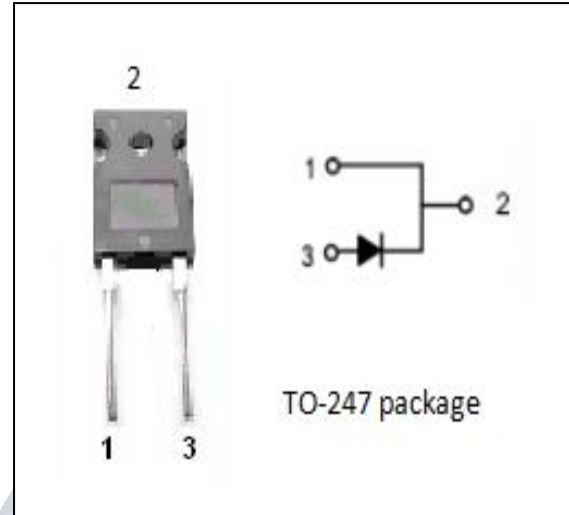
DSEI60-12A

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($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER		VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		1200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=90^{\circ}\text{C}$		52	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase)@ $T_c=45^{\circ}\text{C}$	50HZ 60HZ	500 540	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$		189	W
T_J	Junction Temperature		-40~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range		-40~150	$^{\circ}\text{C}$

Ultra fast Rectifier**DSEI60-12A****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.66	°C/W
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	35	°C/W

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

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

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