

Ultra fast Rectifier

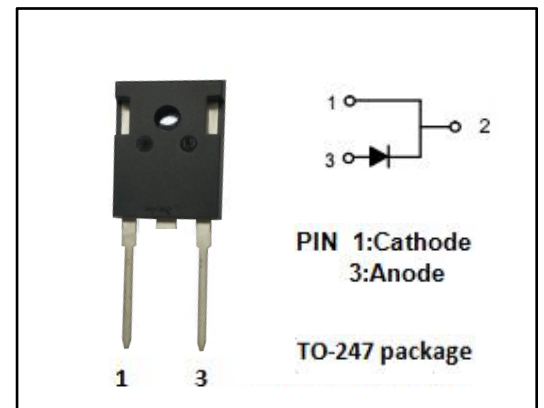
DSEP60-12B

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

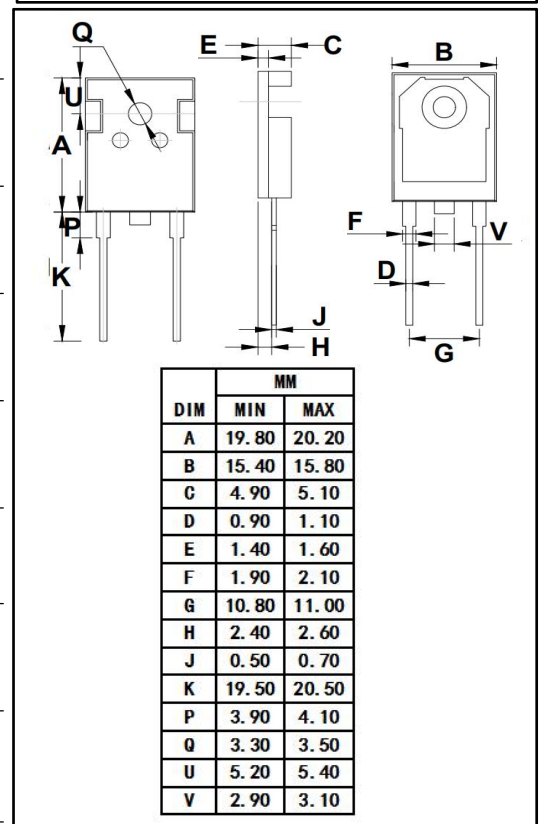
APPLICATIONS

- 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 @ $T_c=90^{\circ}\text{C}$	60	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase)@ $T_c=45^{\circ}\text{C}$	500	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$	330	W
T_J	Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.45	°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	$I_F=60\text{A}; T_j=25^{\circ}\text{C}$ $I_F=60\text{A}; T_j=150^{\circ}\text{C}$	3.25 2.2	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=150^{\circ}\text{C}$	0.2 1	mA
t_{rr}	Maximum Reverse Recovery Time	$I_F=60\text{A}; -di_F/dt=200\text{A}/\mu\text{s}; V_R=600\text{V}$	65	ns

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