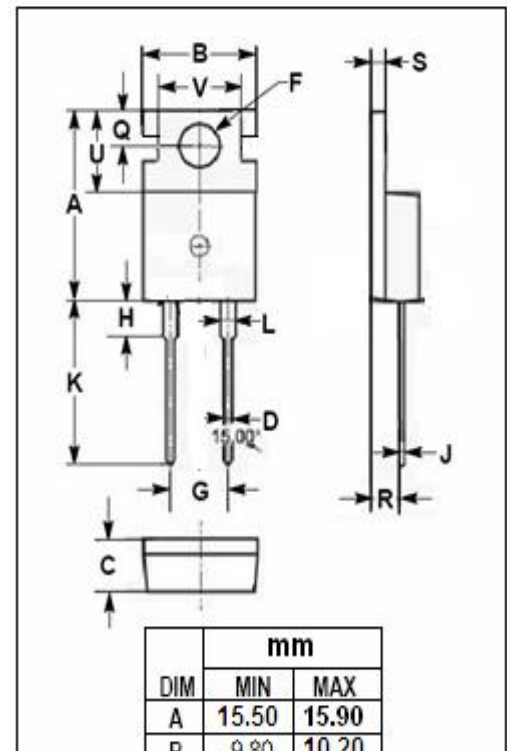
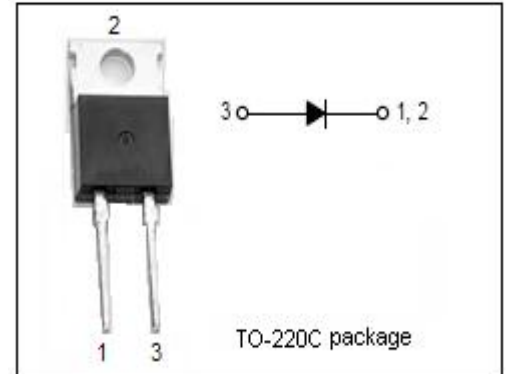


**Ultra fast Rectifier**
**DSEP12-12A**
**FEATURES**

- With TO-220 packaging
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage protection
- High surge capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching power supply
- High frequency inverters
- Reverse battery protection
- Polarity protection applications


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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RMS</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	1200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =128°C	15	A
I <sub>FRM</sub>	Repetitive Peak Forward Current@T <sub>c</sub> =128°C	35	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	90	A
T <sub>j</sub>	Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~175	°C

## Ultra fast Rectifier

## DSEP12-12A

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.6	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300  $\mu$  s, Duty Cycle  $\leq$  1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F = 15A; T_c = 25^{\circ}C$ $I_F = 15A; T_c = 150^{\circ}C$	1.79 2.75	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R = \text{rated } V_{RRM}; T_c = 25^{\circ}C$ $T_c = 150^{\circ}C$	100 500	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F = 1A; dI_F/dt = -100A/\mu$ s; $V_R = 30V$	40	ns

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