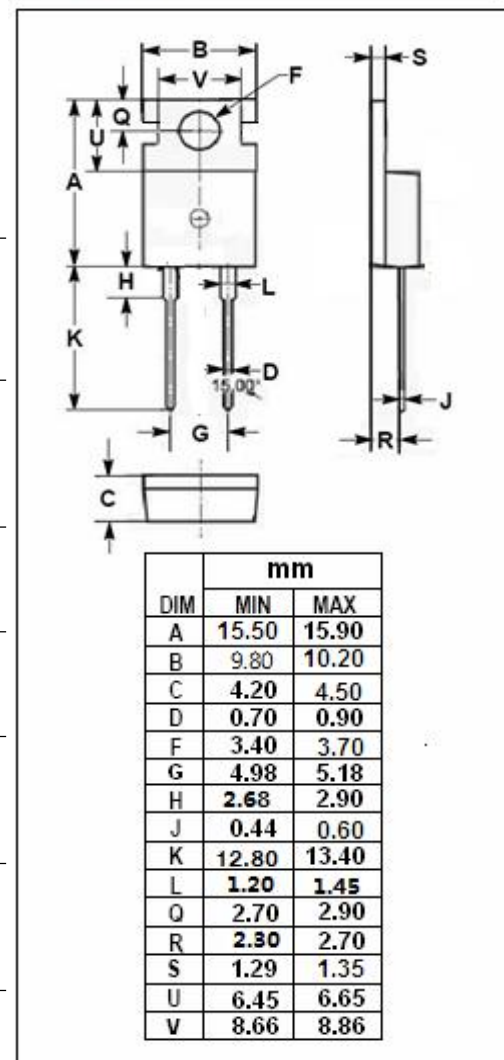
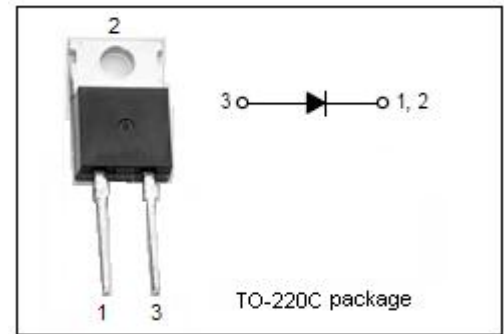


**Fast Recovery Diode**
**DSEI12-10A**
**FEATURES**

- 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>R</sub> RM V <sub>R</sub> MS V <sub>R</sub>	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	1000	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @T <sub>c</sub> =128°C	12	A
I <sub>FRM</sub>	Repetitive Peak Forward Current@T <sub>c</sub> =128°C	150	A
I <sub>FSM</sub>	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	75	A
P <sub>D</sub>	Maximum power dissipation	78	W
T <sub>j</sub>	Junction Temperature	-40~150	°C
T <sub>stg</sub>	Storage Temperature Range	-40~150	°C

## Fast Recovery Diode

DSEI12-10A

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.6	°C/W

## ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μs, Duty Cycle≤1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V <sub>F</sub>	Maximum Instantaneous Forward Voltage	I <sub>F</sub> = 12A; T <sub>C</sub> = 25°C I <sub>F</sub> = 12A; T <sub>C</sub> = 150°C	2.7 2.1	V
I <sub>R</sub>	Maximum Instantaneous Reverse Current	V <sub>R</sub> = rated V <sub>RRM</sub> ; T <sub>C</sub> = 25°C V <sub>R</sub> = 0.8V <sub>RRM</sub> ; T <sub>C</sub> =25°C V <sub>R</sub> = 0.8V <sub>RRM</sub> ; T <sub>C</sub> =125°C	0.25 0.15 4	mA
t <sub>rr</sub>	Maximum Reverse Recovery Time	I <sub>F</sub> =1A; dI <sub>F</sub> /dt=-50A/ μ s; V <sub>R</sub> =30V	60	ns

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