

Fast Recovery Diode

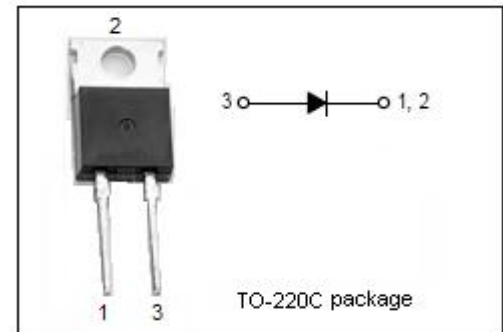
DSEI12-10A

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

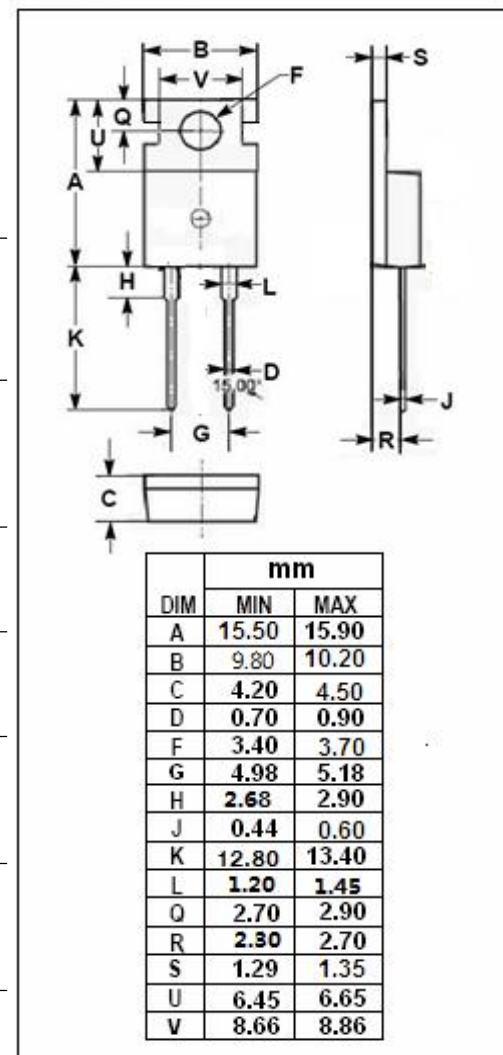
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _R RM V _R MS V _R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	1000	V
I _{F(AV)}	Average Rectified Forward Current @T _c =128°C	12	A
I _{FRM}	Repetitive Peak Forward Current@T _c =128°C	150	A
I _{FSM}	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	75	A
P _D	Maximum power dissipation	78	W
T _j	Junction Temperature	-40~150	°C
T _{stg}	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	1.6	°C/W

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

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

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