

Ultra fast Rectifier

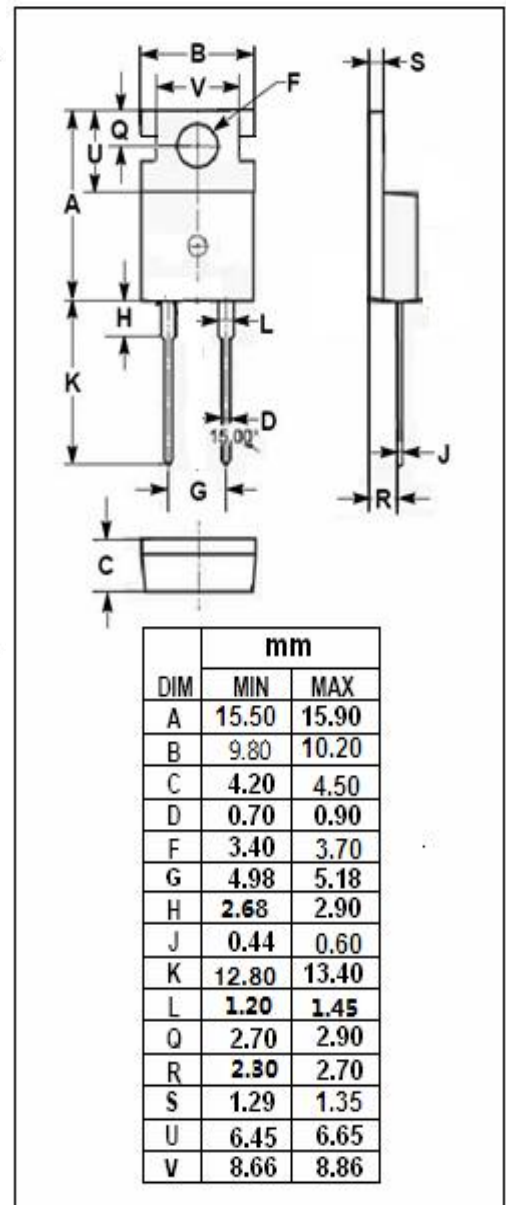
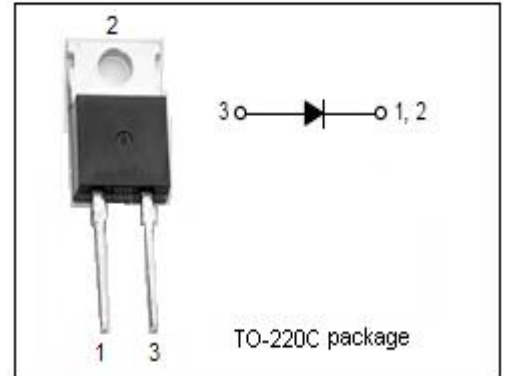
DSEP29-12A

FEATURES

- With TO-220 packaging
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guard ring for over voltage 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 RMS V _R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	1200	V
I _F (AV)	Average Rectified Forward Current @T _c =115°C	30	A
I _{FRM}	Repetitive Peak Forward Current@T _c =115°C	35	A
I _{FSM}	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	200	A
T _j	Junction Temperature	-55~150	°C
T _{stg}	Storage Temperature Range	-55~175	°C

Ultra fast Rectifier**DSEP29-12A****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.9	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V _F	Maximum Instantaneous Forward Voltage	I _F = 30A; T _c = 25°C I _F = 30A; T _c = 150°C	2.75 1.81	V
I _R	Maximum Instantaneous Reverse Current	V _R = rated V _{RRM} ; T _c = 25°C T _c =150°C	250 1000	μA
t _{rr}	Maximum Reverse Recovery Time	I _F =1A; dI _F /dt=-200A/μs; V _R =30V	40	ns

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