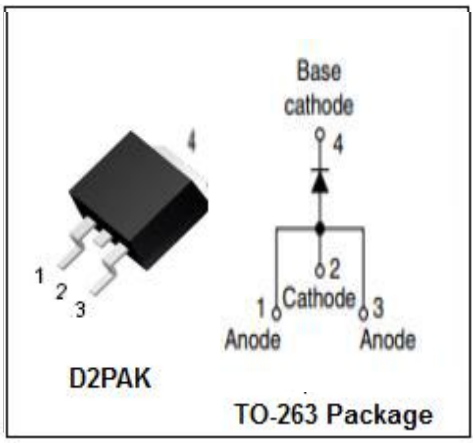
Ultra fast Rectifier DSEP12-12AZ

FEATURES

- With TO-263 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

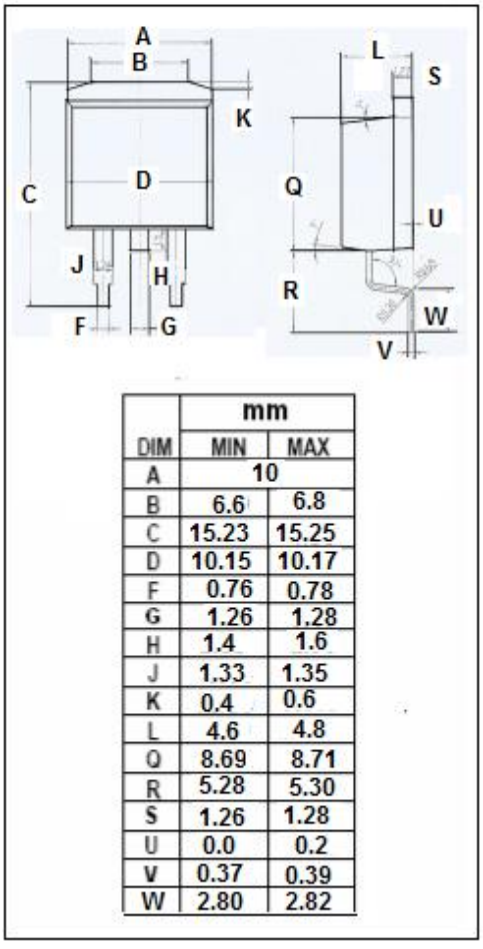


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	1200	V
$I_{F(AV)}$	Average Rectified Forward Current @Tc=135℃	12	A
I_{FRM}	Repetitive Peak Forward Current@Tc=128℃	35	A
I_{FSM}	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions;One shot(50Hz)	90	A
Tj	Junction Temperature	-55~150	℃
T_{stg}	Storage Temperature Range	-55~175	℃



DIM	mm MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.6	℃/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= 15A;Tc= 25℃ I_F= 15A;Tc= 150℃ I_F= 30A;Tc= 25℃ I_F= 30A;Tc= 150℃	2.62 1.87 3.19 2.56	V
I_R	Maximum Instantaneous Reverse Current	V_R= rated $V_{RRM;}$Tc= 25℃ Tc=150℃	100 500	μA
t_{rr}	Maximum Reverse Recovery Time	I_F =1A;dI_F/dt=-100A/ μs;V_R=30V	40	ns

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