

Ultra fast Rectifier

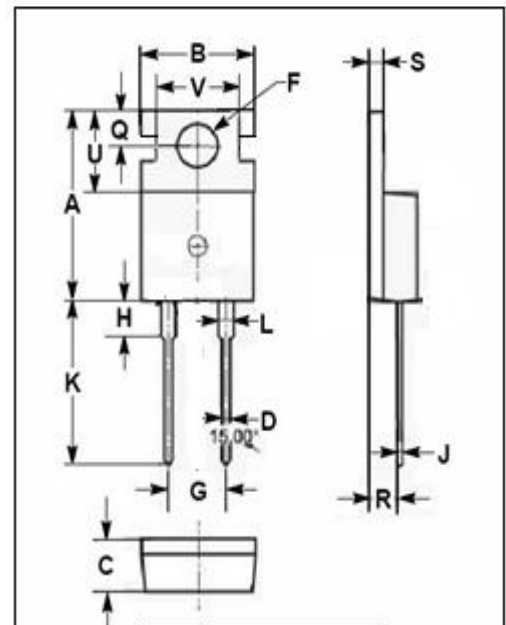
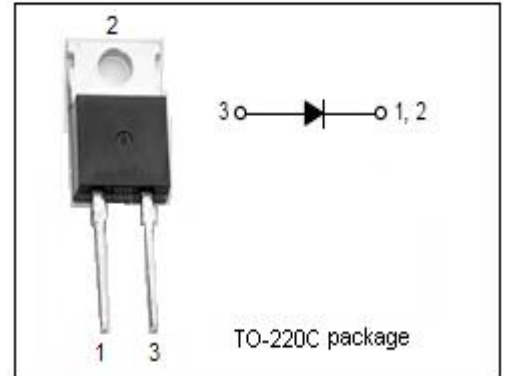
DSEP15-06AS

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



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RMS} V _R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	600	V
I _{F(AV)}	Average Rectified Forward Current @T _c =140°C	15	A
I _{FSM}	Nonrepetitive Peak Surge Current 10 ms single half sine-wave superimposed on rated load conditions; One shot	110	A
P _D	Maximum Power Dissipation	95	W
T _j	Junction Temperature	-40~175	°C
T _{stg}	Storage Temperature Range	-55~175	°C

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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 μ s, Duty Cycle \leq 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 15A; T_c = 25^{\circ}C$ $I_F = 15A; T_c = 150^{\circ}C$ $I_F = 30A; T_c = 25^{\circ}C$ $I_F = 30A; T_c = 150^{\circ}C$	2.04 1.35 2.25 1.59	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	μA
t_{rr}	Maximum Reverse Recovery Time	$I_F = 15A; dsI_F/dt = 200A/\mu s; V_R = 300V$	35	ns

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