

## Ultra fast Rectifier

## DSEP40-03AS

### FEATURES

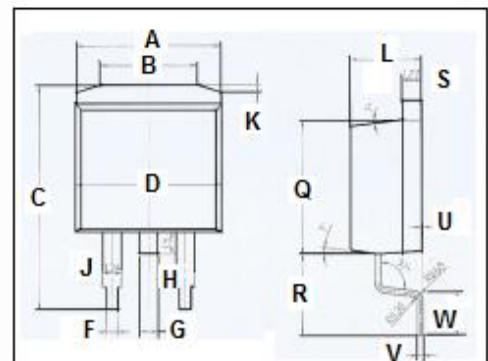
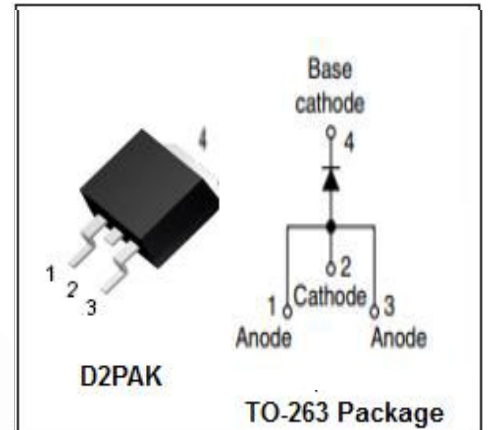
- With TO-263(DPAK) packaging
- Insulated package by fully molding
- Low forward voltage drop
- Super high speed switching
- High reliability by planer design
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Switching power supply
- Power switching circuits
- High speed power switching

### ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	300	V
IF(AV)	Average Rectified Forward Current @ $T_c=135^{\circ}\text{C}$ ; Square Wave; Duty=1/2	40	A
IFSM	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions	300	A
TJ	Junction Temperature	-40~175	$^{\circ}\text{C}$
Tstg	Storage Temperature Range	-40~175	$^{\circ}\text{C}$



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

**Ultra fast Rectifier****DSEP40-03AS****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	0.85	°C/W

**ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C) (Pulse Test: Pulse Width=300 μ s, Duty Cycle≤2%)**

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V <sub>F</sub>	Maximum Instantaneous Forward Voltage	I <sub>F</sub> =40A ;T <sub>c</sub> =25°C I <sub>F</sub> =40A ;T <sub>c</sub> =150°C	1.42 1.11	V
I <sub>R</sub>	Maximum Instantaneous Reverse Current	V <sub>R</sub> = V <sub>RWM</sub> T <sub>c</sub> =25°C V <sub>R</sub> = V <sub>RWM</sub> T <sub>c</sub> =150°C	1 100	uA
t <sub>rr</sub>	Maximum Reverse Recovery Time	I <sub>F</sub> =40A;diF/dt=200A/ μ s,V <sub>R</sub> =100V	35	ns

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