

Ultrafast Rectifier
IDB15E60
FEATURES

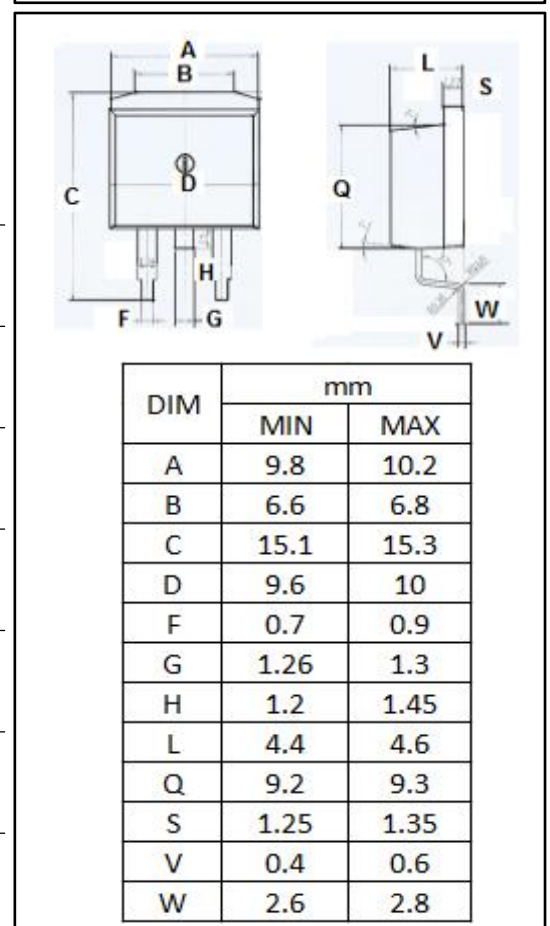
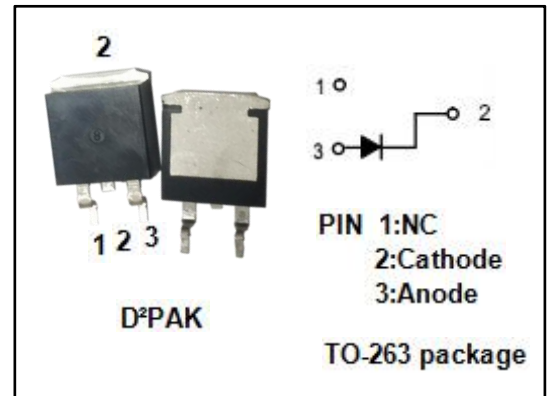
- Guarding for over voltage protection
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Rectifier in switch mode supplies

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	600	V
I _F	Continuous forward current	29.2	A
I _{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	60	A
P _D	Maximum power dissipation	83.3	W
T _J	Junction Temperature	-55~175	°C
T _{stg}	Storage Temperature Range	-55~175	°C



Fast Recovery Rectifier
IDB15E60
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.8	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$) (Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{F^*}	Maximum Instantaneous Forward Voltage	$I_F=15A; T_j=25^{\circ}C$ $I_F=15A; T_j=150^{\circ}C$	2.0 2.0	V
I_{R^*}	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}C$ $V_R=V_{RWM}; T_j=150^{\circ}C$	50 1250	μ A
t_{rr}	Maximum Reverse Recovery Time	$I_F=0.5A; I_r=1A; I_{rr}=0.25A$	87	ns

*: Pulse Test: Pulse width=300us, duty cycle \leq 2.0%

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