

# Ultra fast Rectifier

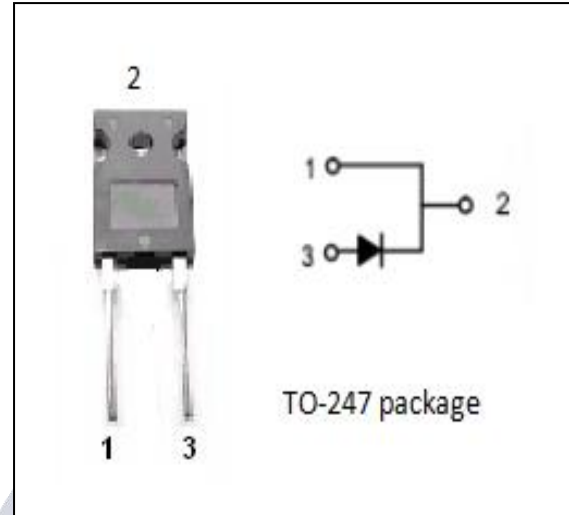
# DSEP60-12AR

## FEATURES

- With TO-247 packaging
- High performance fast recovery diode
- Low loss and soft recovery
- Low forward voltage drop
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Switching power supply
- Power switching circuits
- General purpose



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

SYMBOL	PARAMETER		VALUE	UNIT
$V_{RRM}$ $V_{RWM}$ $V_R$	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		1200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_c=90^{\circ}\text{C}$		70	A
$I_{FSM}$	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase)@ $T_c=45^{\circ}\text{C}$	50HZ	500	A
$P_D$	Total Dissipation @ $T_c=25^{\circ}\text{C}$		190	W
$T_J$	Junction Temperature		-55~150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range		-55~150	$^{\circ}\text{C}$

**Ultra fast Rectifier****DSEP60-12AR****THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.28	°C/W
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	35	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=70\text{A}; T_j=25^{\circ}\text{C}$ $I_F=70\text{A}; T_j=150^{\circ}\text{C}$	1.8 1.5	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}; T_j=25^{\circ}\text{C}$ $V_R=V_{RWM}; T_j=150^{\circ}\text{C}$	0.65 2.5	mA
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=1\text{A}; -di_F/dt=300\text{A}/\mu\text{s}; V_R=30\text{V}$	40	ns

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