

# Ultra fast Rectifier

# ESAD92M-03

### FEATURES

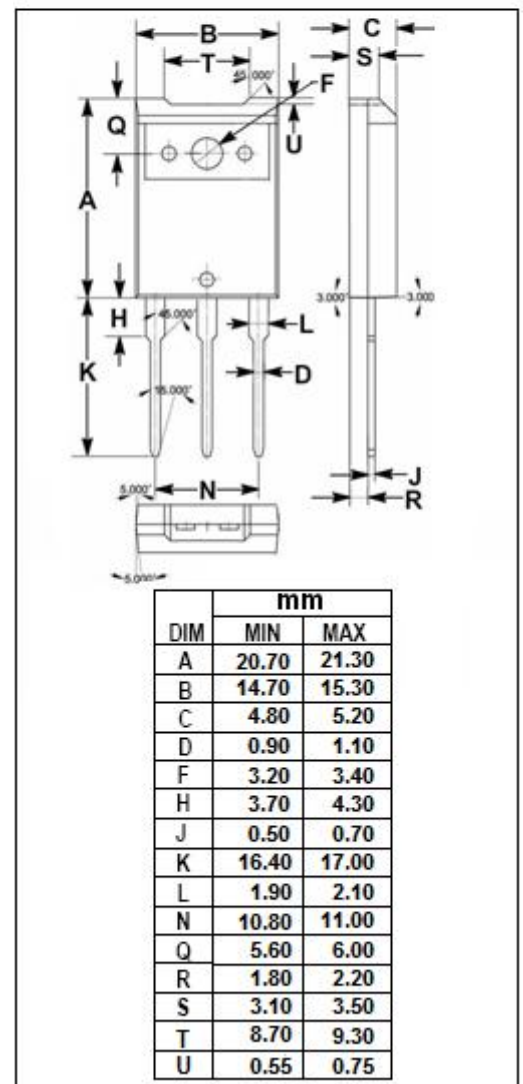
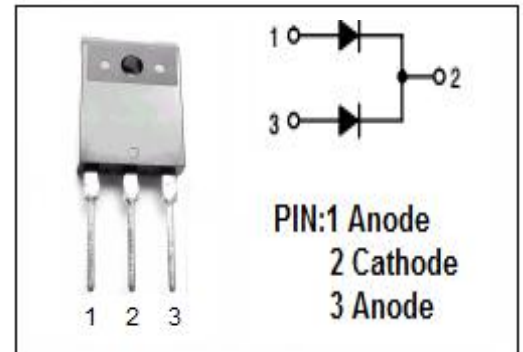
- With TO-3PFa packaging
- Insulated package by fully molding
- Low forward voltage drop
- Super high speed switching
- High reliability by planer design
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

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

### ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
VRRM	Peak Repetitive Reverse Voltage	300	V
VRWM	Working Peak Reverse Voltage	300	
VR	DC Blocking Voltage $t_w=500ns; duty=1/40$	300	
IF(AV)	Average Rectified Forward Current @T <sub>c</sub> =96°C; Square Wave; Duty=1/2	20	A
IFSM	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions	80	A
TJ	Junction Temperature	-40~150	°C
Tstg	Storage Temperature Range	-40~150	°C



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**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{thj-c}$	Thermal Resistance, Junction to Case	2.0	°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	$I_F=10\text{A}$	1.2	V
$I_R$	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}$	200	$\mu$ A
$t_{rr}$	Maximum Reverse Recovery Time	$I_F=0.5\text{A}; I_R=0.2\text{A}; I_{RR}=0.05\text{A}$	40	ns

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