

Ultra fast Rectifier

CTNS-4306S

FEATURES

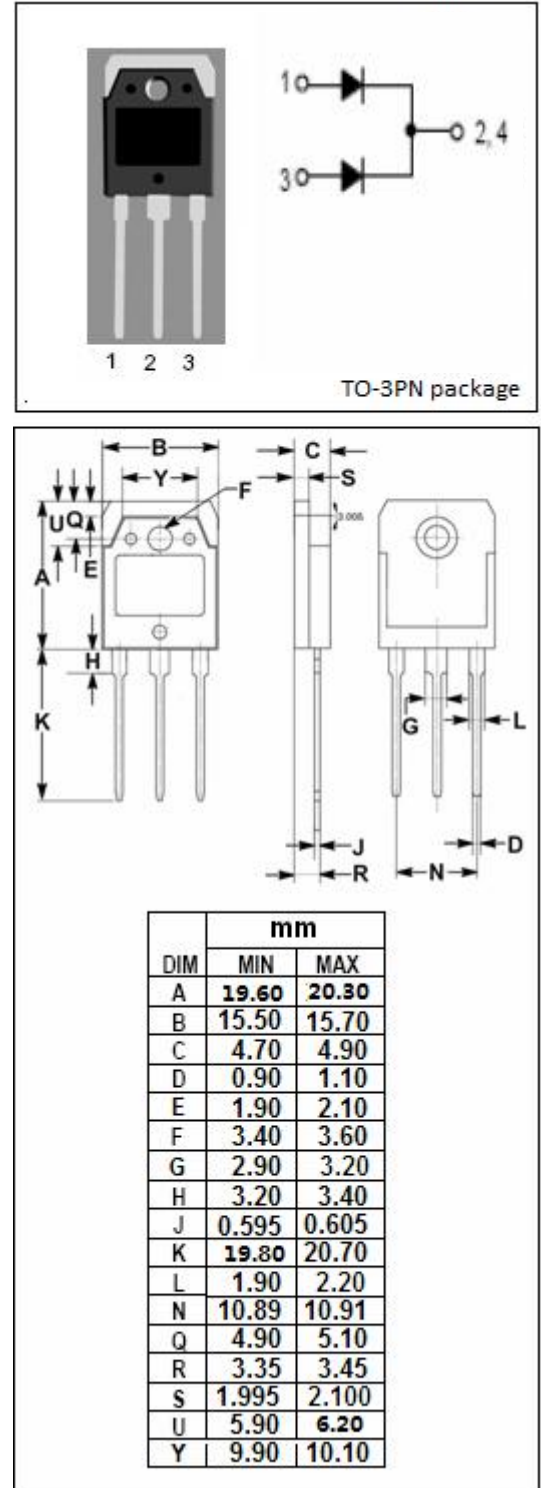
- With TO-3PN packaging
- Low thermal resistance
- Low leakage current
- Super high speed switching
- High reliability by planer design
- Very low on-state loss
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Active PFC in air conditioner
- Interleaved PFC topology in switched-mode power supplies

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 $t_w=500\text{ns}; \text{duty}=1/40$	600	V
IF(AV)	Average Rectified Forward Current @ $T_c=96^{\circ}\text{C}$; Square Wave; Duty=1/2	30	A
IFSM	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions	140	A
TJ	Junction Temperature	-40~150	$^{\circ}\text{C}$
Tstg	Storage Temperature Range	-40~150	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.0	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F=15\text{A}$	1.3	V
I_R	Maximum Instantaneous Reverse Current	$V_R=V_{RWM}$	100	μ A
t_{rr}	Maximum Reverse Recovery Time	$I_F=0.5\text{A}; I_R=0.5\text{A};$ 90% recovery point	100	ns

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