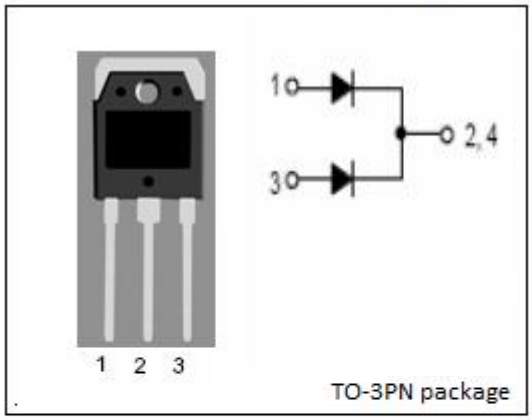
Ultra fast Rectifier

CTNS-4306S

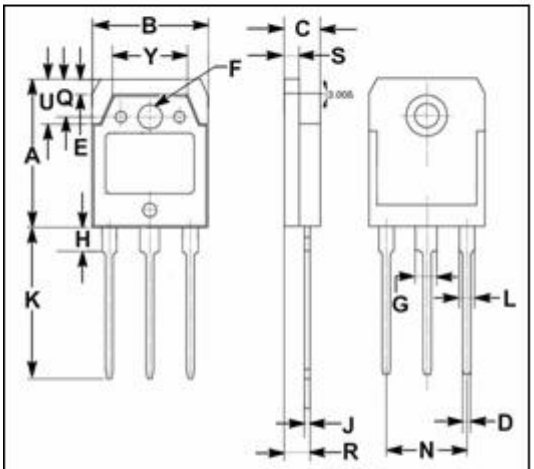


FEATURES

- 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



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
VRRM VRWM VR	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage tw=500ns;duty=1/40	600	V
IF(AV)	Average Rectified Forward Current @Tc=96℃;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	℃
Tstg	Storage Temperature Range	-40~150	℃

THERMAL CHARACTERISTICS

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

ELECTRICAL CHARACTERISTICS(T_a=25℃) (Pulse Test: Pulse Width=300μs,Duty Cycle≤2%)

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