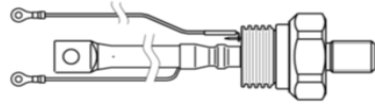


STUD FAST SWITCHING THYRISTOR



ATF310VTS14T

Repetitive voltage up to **1400 V**
Mean on-state current **350 A**
Surge current **6,1 kA**

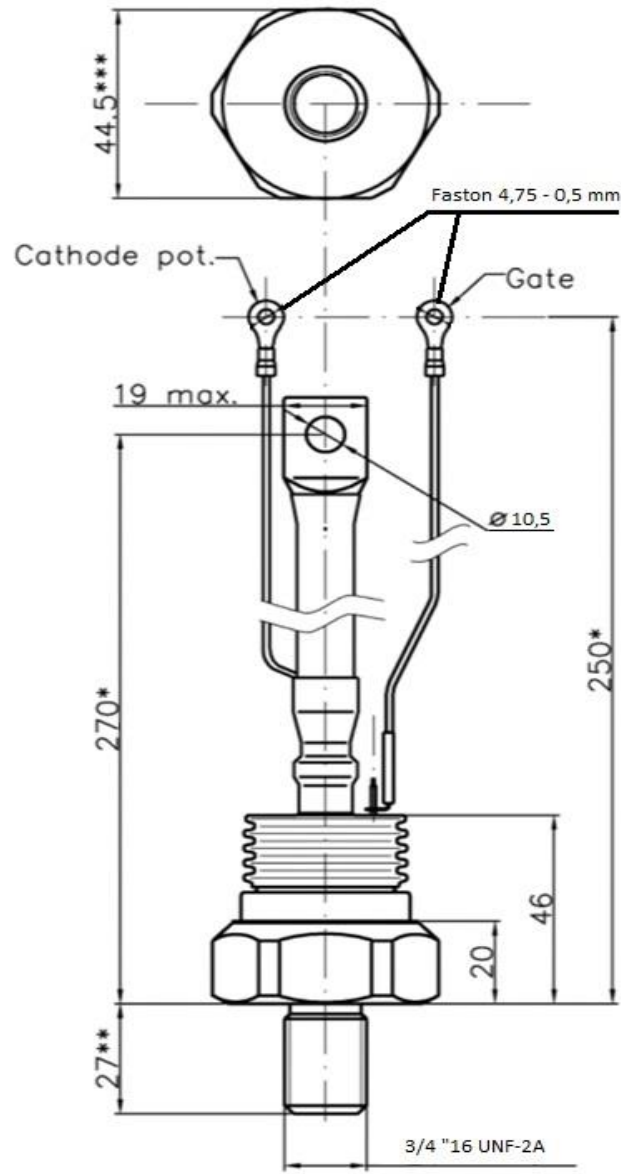
FINAL SPECIFICATION

Mar. 15 - Issue: 00

SYMBOL	CHARACTERISTIC	CONDITIONS	VALUE	UNIT
VOLTAGE RATINGS				
U_{RRM}	Max. Repetitive peak reverse voltage	$T_j=125^{\circ}\text{C}$	1.400	V
U_{DRM}	Max. Repetitive peak off-state voltage	$T_j=125^{\circ}\text{C}$	1.400	V
U_{RSM}	Max. Non repetitive peak reverse voltage	$T_j=125^{\circ}\text{C}$	1.500	V
ON-STATE CONDUCTION				
$I_T(AV)$	Average on-state current	$T_{case}=80^{\circ}\text{C}$	225	A
$I_{(RMS)}$	RMS on-state current		350	A
I_{TSM}	Surge current	$t=10\text{ ms } U_R=0,8U_{RRM}, T_j = 125^{\circ}\text{C}$	6.100	A
I^2t	Maximum I^2t for fusing		186	kA^2s
U_{TM}	On-state voltage max	$I_{TM}=1500\text{A } T_j=25^{\circ}\text{C}$	2,25	V
$U_t(T_0)$	Threshold voltage		1,14	V
r_T	Slope resistance		0,70	mOhms
I_l	Latching current	$U_D=12\text{V } T_j=25^{\circ}\text{C}$	1.200	mA
I_H	Holding current	$U_D=12\text{V } T_j=25^{\circ}\text{C}$	300	mA
SWITCHING				
di/dt	Rate of rise of on-state current repetitive	$T_j=125^{\circ}\text{C } I_{TM}=3I_{TAV}, U_D=0,67U_{DRM}, f=50\text{Hz}, I_{GM}=1\text{A}, di/dt=1\text{A}/\mu\text{s}$	200	$\text{A}/\mu\text{s}$
t_{on}	Turn-on time (typical)	$I_{TM}=100\text{A}, U_{DM}=100\text{V}$	5	μs
t_q	Circuit commutated Turn-off time (typical)	$I_{TM}=250\text{A } T_j=125^{\circ}\text{C } di/dt=25\text{A}/\mu\text{s } du/dt=20\text{V}/\mu\text{s}, U_D=0,67U_{DRM}, U_{RM}=100\text{V}$	60	μs
BLOCKING				
I_{RRM}/I_{DRM}	Peak reverse and off-state leakage current	$T_c=75^{\circ}\text{C}$	33	mA
du/dt	Critical rate of rise of off-state voltage	$T_j=125^{\circ}\text{C}, U_D=0,67U_{DRM}$	320-500	$\text{V}/\mu\text{s}$
TRIGGERING				
I_{GT}	Gate current to trigger	$T_j=25^{\circ}\text{C}, U_D=12\text{V}$	200	mA
U_{GT}	Gate voltage to trigger	$T_j=25^{\circ}\text{C}, U_D=12\text{V}$	3	V
THERMAL AND MECHANICAL SPECIFICATION				
$R_{th(j-c)}$	Thermal resistance - junction to case	DC	0,1	$^{\circ}\text{C}/\text{W}$
$R_{th(c-s)}$	Thermal resistance - case to heatsink		0,05	$^{\circ}\text{C}/\text{W}$
T_j	Maximum operating temperature		-40 to 125	$^{\circ}\text{C}$
T_{stg}	Maximum storage temperature range		-40 to 125	$^{\circ}\text{C}$
F	Mounting torque		38 / 41	Nm
Wt	Approximate weight		500	g

ORDERING INFORMATION : ATF310VTS14T

standard specification VRRM/100



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All the characteristics given in this data sheet are guaranteed only with uniform clamping force, cleaned and lubricated heatsink, surfaces with flatness $< .03$ mm and roughness $< 2 \mu\text{m}$. In the interest of product improvement POSEICO SPA reserves the right to change any data given in this data sheet at any time without previous notice. If not stated otherwise the maximum value of ratings (symbols over shaded background) and characteristics is reported.