



Type SF371-xx20 Fast Stud Mounted Thyristor

Distributed amplified gate for high di/dt and low switching losses

Maximum mean on-state current				I_{TAV}	200 A			
Maximum repetitive peak off-state and reverse voltage				U_{DRM}	1200 ÷ 2200 V			
Turn-off time				U_{RRM}	20; 25; 32 μs			
U_{DRM}, U_{RRM}, V	1200	1300	1400	1500	1600	1800	2000	2200
Voltage code - XX	12	13	14	15	16	18	20	22
$T_{vj}, ^\circ C$	- 60 ÷ 125							

MAXIMUM ALLOWABLE RATINGS

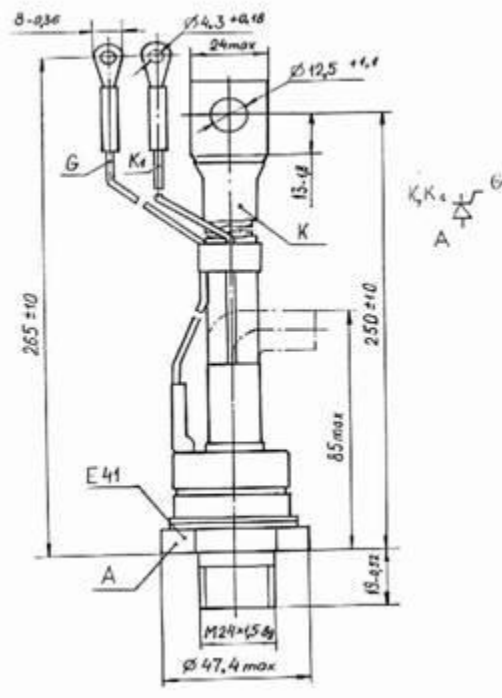
Symbols and parameters		Units	SF371-xx20	Conditions
I_{TAV}	Mean on-state current	A	200	$T_c=85^\circ C$, 180° half-sine wave, 50 Hz
I_{TRMS}	RMS on-state current	A	314	$T_c=85^\circ C$
I_{TSM}	Surge on-state current	KA	6	$T_{vj}=125^\circ C$ $U_R=0$ $t_p=10$ ms
(diT/dt) cr	Critical rate of rise of on-state current : non - repetitive repetitive	A/ μ s	1600 800	$T_{vj}=125^\circ C$; $U_D=0,67 U_{DRM}$, Gate pulse : 10V,5 Ω , 1 μ s rise time, 10 μ s
U_{RGM}	Peak reverse gate voltage	V	5	
T_{stg}	Storage temperature	$^\circ C$	-60 ÷ 125	
T_{vj}	Junction temperature	$^\circ C$	-60 ÷ 125	

CHARACTERISTICS

Symbols and parameters		Units	SF371-xx20	Conditions
U_{TM}	Peak on-state voltage	V	2,3	$T_{vj}=25^\circ C$, $I_{TM}=3,14 I_{TAV}$
$U_{T(TO)}$	Threshold voltage	V	1,45	$T_{vj}=125^\circ C$
R_T	On-state slope resistance	m Ω	1,5	$T_{vj}=125^\circ C$
I_{DRM} I_{RRM}	Repetitive peak off-state and reverse current	mA	70 70	$T_{vj}=125^\circ C$, $U_D = U_{DRM}$ $U_R = U_{RRM}$
I_H	Holding current	A	0,3	$T_{vj}=25^\circ C$, $U_D=12V$, Gate open
U_{GT}	Gate trigger direct voltage	V	2,5	

I _{GT}	Gate trigger direct current	A	0,3	T _{vj} =25°C, U _D =12V
U _{GD}	Gate non-trigger direct voltage	V	0,25	T _{vj} =125°C, U _D = 0,67 U _{DRM}
t _{gd}	Delay time	μs	1,6	T _{vj} =25°C, U _D =300V I _{TM} = 200 A
t _{gt}	Turn-on time	μs	2,5	Gate pulse : 10V, 5Ω, 1 μs rise time, 10μs
t _q	Turn-off time	μs	20÷32 25÷40	T _{vj} =125°C, I _{TM} =200 A di _r /dt=10 A/μs, U _R =100V U _D = 0,67 U _{DRM} du _D /dt=50 V/μs du _D /dt=200 V/μs
(du _D /dt) _{crit}	Critical rate of rise of off-state voltage	V/μs	500 1000	T _{vj} =125°C, U _D = 0,67 U _{DRM} Gate open
R _{thjc}	Thermal resistance junction to case	°C/W	0,09	Direct current

Tightening torque : 40 ÷ 60 Nm
Weight : 480 grams



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