SHANDOR Ltd. Plovdiv, Bulgaria

Type SF071-xx25

Fast Stud Mounted Thyristor

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

Maximum mean on-state current	I_{TAV}	**250 A**
Maximum repetitive peak off-state and reverse voltage	U_{DRM} U_{RRM}	**300 ÷1100 V**
Turn-off time	**tq**	**12,5; 16; 20 µs**

U_{DRM}, U_{RRM}, V	300	400	500	600	700	800	900	1000	1100
Voltage code - **XX**	3	4	5	6	7	8	9	10	11
Tvj, °C	- 60 ÷ 125								

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	SF071-xx25	Conditions
I_{TAV}	Mean on-state current	A	250	Tc=90 °C, 180° half-sine wave, 50 Hz
I_{TRMS}	RMS on-state current	A	392	Tc=90 °C
I_{TSM}	Surge on-state current	KA	7,0	Tvj=125°C U_R=0 tp=10 ms
(di$_T$/dt) cr	Critical rate of rise of on-state current : non - repetitive repetitive	A/µs	 1600 800	Tvj=125°C ; U_D=0,67 U_{DRM}, Gate pulse : 10V,5 Ω, 1µs rise time, 10 µs
U_{RGM}	Peak reverse gate voltage	V	5	
Tstg	Storage temperature	°C	-60 ÷ 125	
Tvj	Junction temperature	°C	-60 ÷ 125	

CHARACTERISTICS

Symbols and parameters		Units	SF071-xx25	Conditions
U_{TM}	Peak on-state voltage	V	2,1	Tvj=25°C, I_{TM}=3,14 I_{TAV}
$U_{T(TO)}$	Threshold voltage	V	1,3	Tvj=125°C
R_T	On-state slope resistance	mΩ	0,7	Tvj=125°C
I_{DRM} I_{RRM}	Repetitive peak off-state and reverse current	mA	50 50	Tvj=125°C, U_D = U_{DRM} U_R= U_{RRM}
I_H	Holding current	A	0,3	Tvj=25°C,U_D=12V, Gate open

U_{GT}	Gate trigger direct voltage	V	2,5	
I_{GT}	Gate trigger direct current	A	0,3	Tvj=25°C, U_D=12V
U_{GD}	Gate non-trigger direct voltage	V	0,25	Tvj=125°C, U_D = 0,67 U_{DRM}
tgd	Delay time	µs	1,6	Tvj=25°C,U_D=300V I_{TM} = 250 A Gate pulse : 10V, 5Ω, 1 µs rise time, 10µs
tgt	Turn-on time	µs	2,5	
tq	Turn-off time	µs	12,5÷20 16÷25	Tvj=125°C, I_{TM} =250 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	Tvj=125°C, U_D = 0,67 U_{DRM} Gate open
Rthjc	Thermal resistance junction to case	°C/W	0,075	Direct current

Tightening torgue : 40 ÷ 60 Nm
Weight : 480 grams