SHANDOR Ltd. Plovdiv, Bulgaria

Type SF353-xx80

High Frequency Inverter grade Capsule Thyristor

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

Maximum mean on-state current						I_{FAV}	**800 A**		
Maximum repetitive peak off-state and reverse voltage						U_{DRM} U_{RRM}	**2200 ÷3400 V**		
Turn-off time						**tq**	**63; 80; 100 µs**		
U_{DRM}, U_{RRM}, V			2200	2400	2600	2800	3000	3200	3400
Voltage code - **XX**			22	24	26	28	30	32	34
Tvj, °C	- 60 ÷ 125								

MAXIMUM ALLOWABLE RATINGS

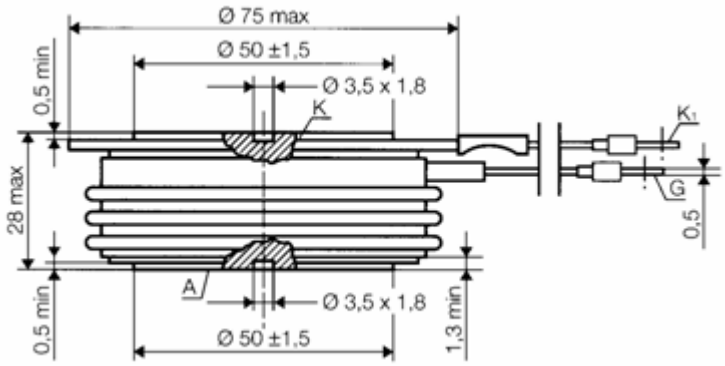
Symbols and parameters		Units	SF353-xx80	Conditions
I_{FAV}	Mean on-state current	A	800 1110	Tc=81°C, Tc=55°C, 180° half-sine wave, 50 Hz
I_{TRMS}	RMS on-state current	A	**1255**	Tc=81 °C, 50 Hz
I_{TSM}	Surge on-state current	kA	16	Tvj=125°C U_R=0 tp=10 ms
$(di_T/dt)_{cr}$	Critical rate of rise of on-state current: non – repetitive repetitive	A/µs	 2000 1250	Tvj=125°C; U_D=0,67 U_{DRM}, Gate pulse : 10V,5Ω, 1µs rise time, 10µs
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	SF353xx80	Conditions
U_{TM}	Peak on-state voltage	V	2,6	Tvj=25°C, I_{TM}=3,14 I_{TAV}
$U_{T(TO)}$	Threshold voltage	V	1,6	Tvj=125°C
r_T	Slope resistance	mΩ	0,51	Tvj=125°C
I_{DRM} I_{RRM}	Repetitive peak off-state and reverse current	mA	90 90	Tvj=125°C, U_D= U_{DRM} U_R= U_{RRM}

I_L	Latching current	A	15	Tvj=25°C; U_D=12V, Gate pulse: 10V,5Ω, 1µs rise time, 10µs
I_H	Holding current	A	1,0	Tvj=25°C; U_D=12, Gate open
U_{GT}	Gate trigger direct voltage	V	2,5	Tvj=25°C; U_D=12V
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	2,5	Tvj=25°C, U_D=500V, I_{TM}=800A Gate pulse: 10V,5Ω, 1µs rise time, 10µs
tgt	Turn-on time	µs	4,0	
tq	Turn-off time	µs	63÷100 80÷125	Tvj=125°C, I_{TM}=800A, di_R/dt= 10 A/µs U_R=100V U_D=0,67 U_{DRM} Di_D/dt= 50 A/µs Di_D/dt= 200 A/µs
Qrr	Recovered charge	µC	1200	Tvj=125°C, I_{TM}=800A, di_R/dt= 50 A/µs, U_R=100V
(di_D/dt) cr	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	0,021	Direct current, double side cooled

Mounting force : 19 – 28 kN
Weight : 580 gram



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