

KP600-POWER THYRISTOR

Jiangsu Yangjie Runau Semiconductor Co.,Ltd

1200-1800 V_{DRM}

HIGH POWER THYRISTOR FOR PHASE CONTROL APPLICATIONS

Features:

- . All Diffused Structure
- . Amplifying Gate Configuration
- . Blocking capability up to 1800 volts
- . High dv/dt Capability
- . Pressure Assembled Device

ELECTRICAL CHARACTERISTICS AND RATINGS

Blocking - Off State

Device Type	V _{RRM} (1)	V _{DRM} (1)	V _{RSM} (1)
KP600/12	1200	1200	1400
KP600/14	1400	1400	1600
KP600/16	1600	1600	1800
KP600/18	1800	1800	2000

V_{RRM} = Repetitive peak reverse voltage

V_{DRM} = Repetitive peak off state voltage

V_{RSM} = Non repetitive peak reverse voltage (2)

Repetitive peak reverse

Gating

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Peak gate power dissipation	P _{GM}		20		W	
Average gate power dissipation	P _{G(AV)}		4		W	
Gate-trigger current	I _{GT}		150		mA	V _D = 12 V; R _L = 3 ohms; T _j = +25 °C
Gate- trigger voltage	V _{GT}	0.70	2.5		V	V _D = 12 V; R _L = 3 ohms; T _j = +25 °C
Peak negative voltage	V _{GRM}		5		V	

Dynamic

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Delay time	t _d		3.0	2.5	μs	I _{TM} = 50 A; V _D = 67% V _{DRM} Gate pulse: V _G = 30 V; R _G = 10 ohms; t _r 2 % 0 p 2 %
Turn-off time (with V _R = -5 V)	t _q			150	μs	I _{TM} = 600 A; di/dt = - 10 A/μs; V _R = 50 V; dV/dt = 30V/μs ; V _D = 67% V _{DRM} ; T _j = 125°C
Reverse recovery charge	Q _{rr}			1500	μC	I _{TM} = 600; di/dt = -10A/s; V _R = 50 V; T _j = 125°C

THERMAL AND MECHANICAL CHARACTERISTICS AND RATINGS

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Operating temperature	T _j	-40	+125		°C	
Storage temperature	T _{stg}	-40	+140		°C	
Thermal resistance - junction to case	R _{θ(c)}		0.05		°C/W	Double sided cooled
Thermal resistance - case to heatsink	R _{θ(s)}		0.01		°C/W	Double sided cooled
Mounting force	P	9	11	10	kN	
Weight	W			0.26	kg	

* Mounting surfaces smooth, flat and greased

