KP1900-POWER THYRISTOR

3200-3600 V_{DRM}

****

HIGH POWER THYRISTOR FOR PHASE CONTROL APPLICATIONS

Features:

- **All Diffused Structure**
- **Amplifying Gate Configuration**
- **Blocking capability up to 3600 volts**
- **High dv/dt Capability**
- **Pressure Assembled Device**

ELECTRICAL CHARACTERISTICS AND RATINGS

Blocking - Off State

Device Tyy n

ELECTRICAL CHARACTERISTICS AND RATINGS KP1900-POWER THYRISTOR

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}		200		mA	V_D =12 V;R_L = 3 ohms;T_j = +25 °C
Gate- trigger voltage	V_{GT}	0.7	3.0		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	s	I_{TM}=100A; V_D=67%V_{DRM} Gate pulse:V_G=30V; R_G=10ohms; t_r=0.1 s; t_p=20 s
Turn-off time (with V_R = -5 V)	t_q			600	s	I_{TM} =2000A; di/dt =-10A/ s; V_R =100V; dv/dt=30V/ s ; V_D=67%V_{DRM};Tj=125
Reverse recovery charge	Q_{rr}				C	I_{TM}=2000A di/dt=-10A/ s; V_R=100V; T_j=125

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	$R_{\Theta\ (j-c)}$		0.0125		°C/W	Double sided cooled
Thermal resistance - case to heatsink	$R_{\Theta\ (c-s)}$		0.004		°C/W	Double sided cooled
Mounting force	F	31	35	33	kN	
Weight	m			0.85	kg	

* Mounting surfaces smooth, flat and greased