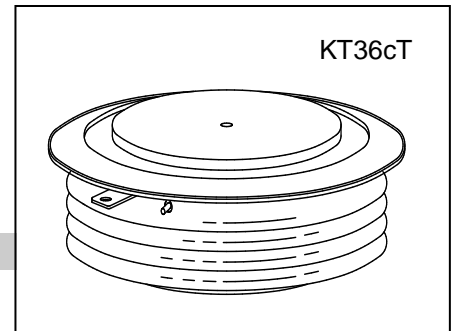




HIGH POWER THYRISTOR FOR PHASE CONTROL APPLICATIONS

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 <sub>RRM</sub> (1)	V <sub>DRM</sub> (1)	V <sub>RSM</sub> (1)
KP400/12	1200	1200	1400
KP400/14	1400	1400	1600
KP400/16	1600	1600	1800
KP400/18	1800	1800	2000

V<sub>RRM</sub> = Repetitive peak reverse voltage  
 V<sub>DRM</sub> = Repetitive peak off state voltage  
 V<sub>RSM</sub> = Non repetitive peak reverse voltage (2)

Repetitive peak reverse leakage and off state leakage	I <sub>RRM</sub> /I <sub>DRM</sub>	2 mA 35 mA (3)
Critical rate of voltage rise	dv/dt (4)	1000 V/μsec

Notes:

- (1) All voltage ratings are specified for an applied 50Hz/60zHz sinusoidal waveform over the temperature range 0 to +125 °C.
- (2) 10 msec. max. pulse width
- (3) Maximum value for T<sub>j</sub> = 125 °C.
- (4) Minimum value for linear and exponential waveshape to 67% rated V<sub>DRM</sub>. Gate open. T<sub>j</sub> = 125 °C.
- (5).The value of di/dt is established in accordance with standard JB/T 8950.2-2013

Conducting - On State

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	I <sub>T(AV)</sub>		400		A	Sinewave, 180° conduction, T <sub>c</sub> =70°C
RMS value of on-state current	I <sub>T(RMS)</sub>		628		A	Nominal value
Peak one cycle surge (non repetitive) current	I <sub>TSM</sub>		4800		A	10.0 msec (50Hz), sinusoidal wave-shape, 180° conduction, T <sub>j</sub> = 125 °C
I square t	I <sup>2</sup> t		1.1x10 <sup>5</sup>		A <sup>2</sup> s	10 msec
Latching current	I <sub>L</sub>		1000		mA	V <sub>D</sub> = 12 V; R <sub>L</sub> = 12 ohms
Holding current	I <sub>H</sub>		200		mA	V <sub>D</sub> = 12 V; I = 2.5 A
Peak on-state voltage	V <sub>TM</sub>		1.60		V	I <sub>TM</sub> =1200A; T <sub>j</sub> =25°C
Threshold voltage, low-level	V <sub>TO</sub>		1.05		V	T <sub>j</sub> =125°C
Slope resistance, low-level	r <sub>T</sub>		0.45			300A to 1500A
Critical rate of rise of on-state current	di/dt		150		6	Repetition

**Gating**

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Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
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