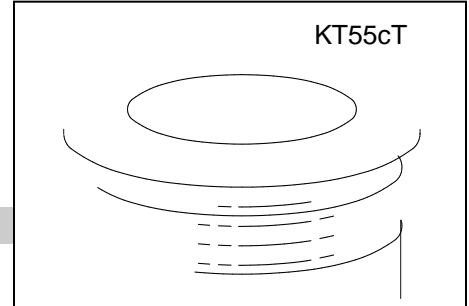




HIGH POWER THYRISTOR FOR INVERTER APPLICATION

Features:

- . All Diffused Structure
- . Amplifying Gate Configuration
- . Blocking capability up to 3000 volts
- . High dv/dt Capability
- . Pressure Assembled Device



ELECTRICAL CHARACTERISTICS AND RATINGS

Blocking-Off State

Device Type	V _R RM (1)	V _D RM (1)	V _R SM (1)
KK1000/25	2500	2500	2700
KK1000/28	2800	2800	3000
KK1000/30	3000	3000	3200

V_{RRM} = Repetitive peak reverse voltage
 V_{DRM} = Repetitive peak off state voltage
 V_{RSM} = Non Repetitive peak reverse voltage(2)

Repetitive peak reverse leakage and off state leakage	I _{RRM} /I _{DRM}	5 mA 100 mA (3)
Critical rate of voltage rise	dv/dt (4)	1000 V/sec (min)

Notes:

All ratings are specified for T_j=25 °C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range 0 to +125 °C

(2) 10 msec. Max. Pulse width

(3) Maximum value for T_j=125 °C.

(4) Minimum value for linear and exponential waveshape to 67% rated V_{DRM}. Gate open, T_j=125 °C

(5) The value of di/dt is established in accordance with JB/T4193-2013.

Conducting-On State

Parameter	Symbol	Min.	Max.	Typ.	Units	Conditions
Average value of on-state current	I _{T(AV)}		1000		A	Sinewave, 180° conduction, T _c =55°C
RMS value of on-state current	I _{TRMS}		1570		A	Nominal value
Peak one cycle surge (non repetitive) current	I _{TSM}		12000		A	10 msec (50Hz), sinusoidal wave-shape, 180° conduction, T _j = 125 °C
I square t	I ² t		7.2x10 ⁵		A ² s	10 msec
Latching current	I _L		1000		mA	V _D =12V; R _L =12ohms
Holding current	I _H		200		mA	V _D =12V; I=2.5A
Peak on-state voltage	V _{TM}		2.90		V	I _{TM} = 3000A; T _j =25°C
Threshold voltage, low level	V _{TO}		1.58		V	T _j =125°C
Slope resistance, low-level	r _T		0.44		mΩ	1000A to 2500A
Critical rate of rise of on-state current(5)	di/dt		200		A/μs	Repetition

Gating

Parameter

Symbol

