



XSDT71

40mm / 7kV THYRISTOR

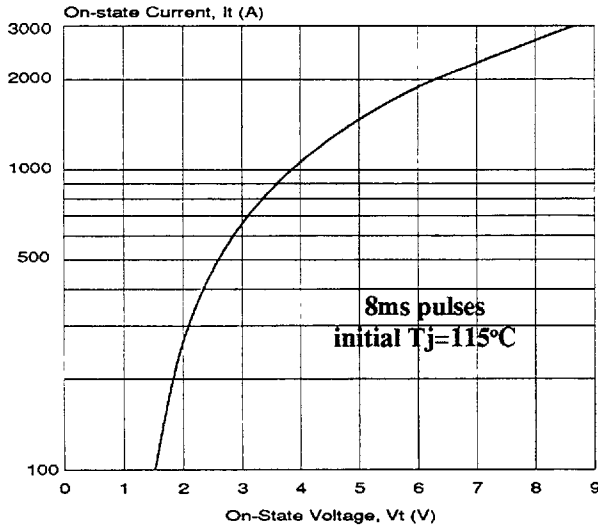
Type SDT71 thyristor is suitable for phase control applications such as HVDC valves, static VAR compensators and synchronous motor drives.

The silicon junction is manufactured by the proven multi-diffusion process and is supplied in an industry standard disc-type package, ready to mount to forced or naturally cooled heat dissipators using commercially available mechanical clamping hardware. *Prefix "X" is used to denote an advanced specification. Some changes may be necessary to accommodate*

PRINCIPAL RATINGS AND CHARACTERISTICS

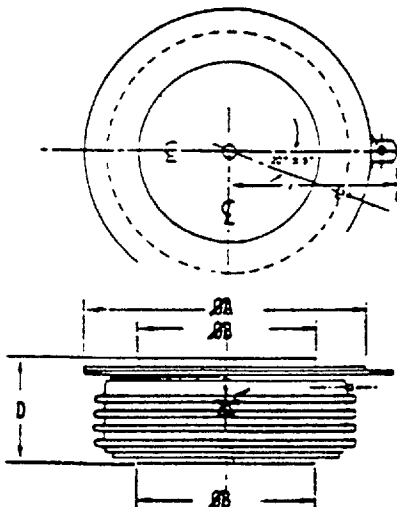
Repetitive peak off-state & reverse volts	V_{DRM} V_{RRM}	$T_j=0$ to 115°C	up to 7000	V
Repetitive working crest voltage	V_{DWM} V_{RWM}	$T_j=0$ to 115°C	$0.8V_{DRM}$ $0.8V_{RRM}$	ma
off-state & reverse leakage current	I_{DWM} I_{RWM}	$T_j=0$ to 115°C	100 100	
Average on-state current	$I_{T(AV)}$	$T_{amb}=70^\circ\text{C}$	350	A
Peak half-cycle non-rep surge current	I_{TSM}	60 Hz 50 Hz	5000 4500	A
On-state voltage	V_{TM}	$I_T=500\text{A}$ $t_r=8\text{ms}$ $T_j=115^\circ\text{C}$	2.60	V
Critical rate of rise of on-state current	di/dt rep	$T_j=115^\circ\text{C}$ 60 Hz	40	A/us
allowable snubber discharge	$V_d=.67V_{DRM}$		50	A
Critical rate of rise of off-state voltage	dv/dt	$T_j=115^\circ\text{C}$ $V_{DCRIT}=60\%V_{DRM}$	1000	V/us
Turn-on delay	t_d	$V_d=.5V_{DRM}$	4	us
Turn-off time	T_{off}	5A/us, -100V 20V/us to 2000V	600	us
Thermal resistance	R_{thJC}		.037	c/w
Externally applied clamping force	F		4000 17.8	lbs. kN
Gate Drive:			30V / 10 ohm / 0.5us risetime 20us pulse duration	

ON-STATE CHARACTERISTIC



95A:

MECHANICAL OUTLINE



MAXIMUM DIMENSIONS

$\text{ØA} = 2.30 \text{ in (58.9 mm)}$

$\text{ØB} = 1.34 \text{ in (34.3 mm)}$

$D = 1.04 \text{ in (26.4 mm)}$

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REPETITIVE PEAK REVERSE AND OFF-STATE BLOCKING VOLTAGE

MODEL	V_{DRM} (volts)	V_{RRM} (volts)
XSDT71MT	7000	7000
XSDT71MS	6900	6900
XSDT71MR	6800	6800
XSDT71MP	6700	6700
XSDT71MM	6600	6600
XSDT71MK	6500	6500