Features

- Metal case with ceramic insulator
- High surge current capabilities
- Comform to partial national standard JB/T8949.2-1999

700A

Typical Applications

- AC/DC Converters
- DC Power supplies
- Machine tool controls

Major Ratings and Characteristics

Parameters		D700A 2KV	Units
$I_{F(AV)}$		700	A
	@ T_{hs}	55	°C
$I_{F(RMS)}$		1120	A
	@ T_{hs}	25	°C
I_{FSM}	@ 50Hz	4945	A
	@ 60Hz	5177	A
I^2t	@ 50Hz	142	KA^2s
	@ 60Hz	130	KA^2s
V_{RRM} range		2000	V
T_J		- 40 to 125	°C

ELECTRICAL SPECIFICATIONS

Voltage Ratings

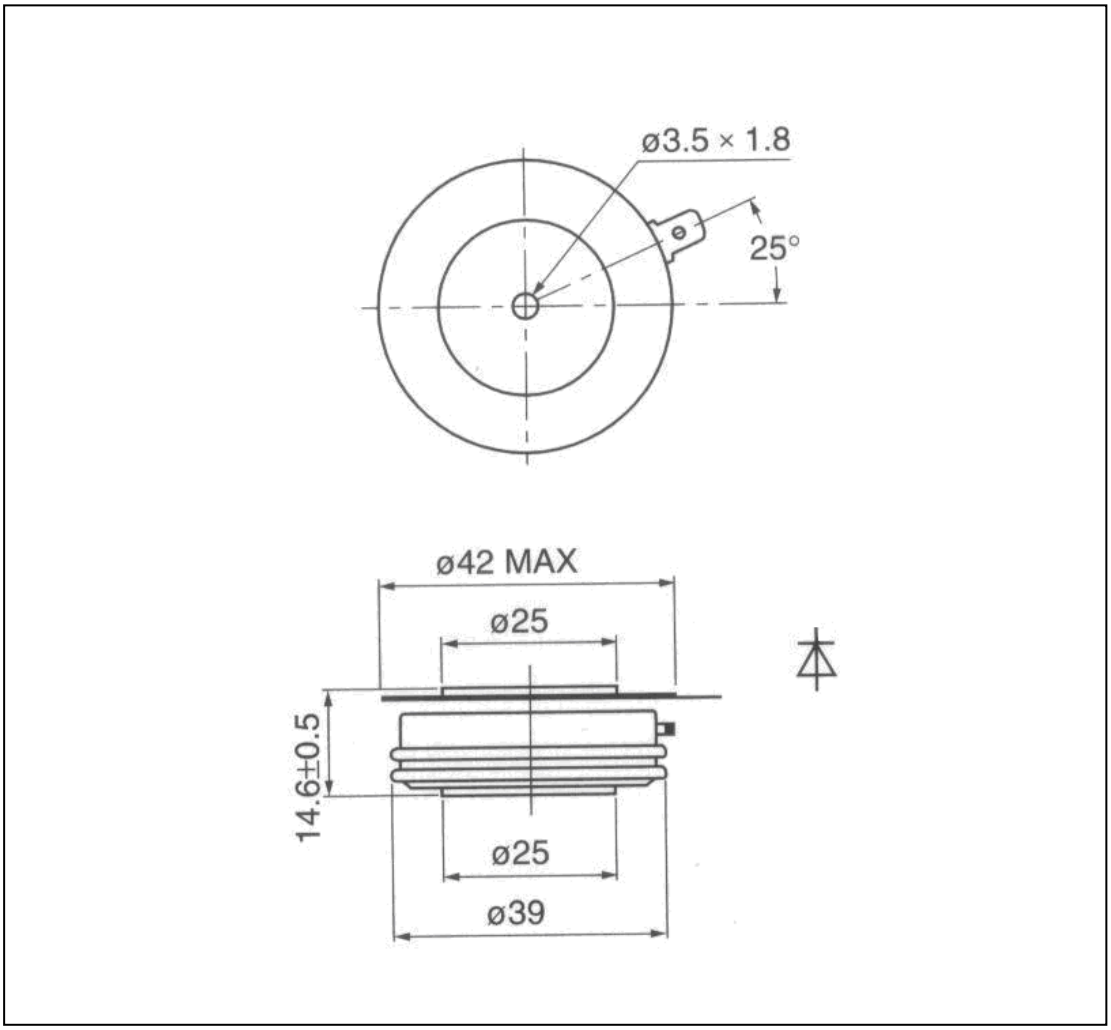
Type number	Voltage Code	V_{RRM}, maximum repetitive peak reverse voltage V	V_{RSM}, maximum non-repetitive peak rev. voltage V	I_{RRM} max. @ $T_J = T_J$ max. mA
D700A	04	400	500	35
	08	800	900	
	12	1200	1300	
	16	1600	1700	
	20	2000	2100	

Forward Conduction

Parameter		D700A	Units	Conditions		
$I_{F(AV)}$	Max. average forward current	700	A	180° conduction, half sine wave		
	@ Heatsink temperature	55	°C	Double side (single side) cooled		
$I_{F(RMS)}$	Max. RMS forward current	1120	A	@ 25° C heatsink temperature double side cooled		
I_{FSM},	Max. peak, one-cycle, non-repetitive forward current	4945	A	t = 10ms	No voltage reapplied	Sinusoidal half wave, Initial $T_J = T_J$ max.
		5177		t = 8.3ms		
		4157		t = 10ms	100% V_{RRM} reapplied	
		4354		t = 8.3ms		
I^2t	Maximum I^2t for fusing	142	KA^2s	t = 10ms	No voltage reapplied	
		130		t = 8.3ms		
		100		t = 10ms	100% V_{RRM} reapplied	
		92		t = 8.3ms		
$I^2\sqrt{t}$	Maximum $I^2\sqrt{t}$ for fusing	1423	$KA^2\sqrt{s}$	t = 0.1 to 10ms, no voltage reapplied		
V_{FM}	Max. forward voltage drop	1.20	V	I_{pk} = 1500A, $T_J = T_J$ max, t_p=10ms sinusoidal wave		
r_{f1}	Low level value of threshold voltage	0.98	MΩ	(16.7%× π × $I_{F(AV)}$<1< π × $I_{F(AV)}$), $T_J=T_J$ max		
r_{f2}	High level value of forward slope resistance	0.66		（1> π ×$I_{F(AV)}$） , $T_J=T_J$ max		

Thermal and Mechanical Specification

	Parameter	D700A	Units	Conditions
T_J	Max.junction operating temperature range	-40 to 125	°C	
T_{stg}	Max. storage temperature range	-40 to 150		
R_{thj-hs}	Max. thermal resistance, junction to heatsink	0.16 0.08	K/W	DC operation single(double) side cooled
F	Mounting torque, ± 10%	4900	N	
		(500)	(Kg)	
wt	Approximate weight	110	g	



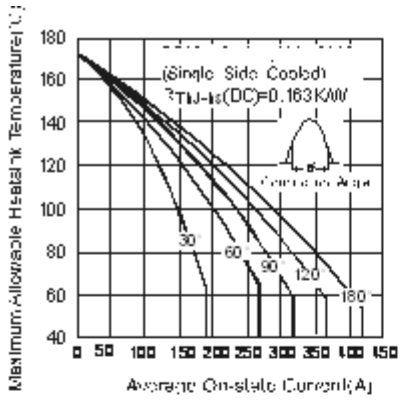


Fig.1 Current Ratings Characteristics

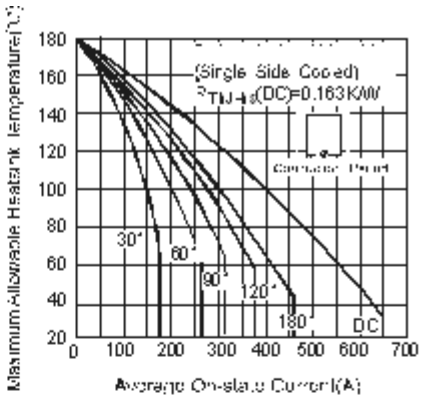


Fig.2 Current Ratings Characteristics

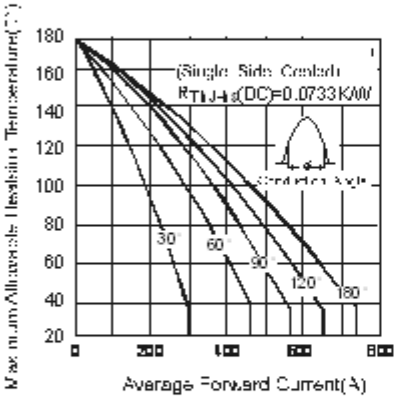


Fig.3 Current Ratings Characteristics

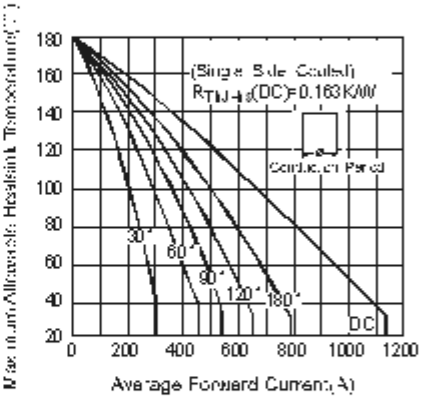


Fig.4 Current Ratings Characteristics

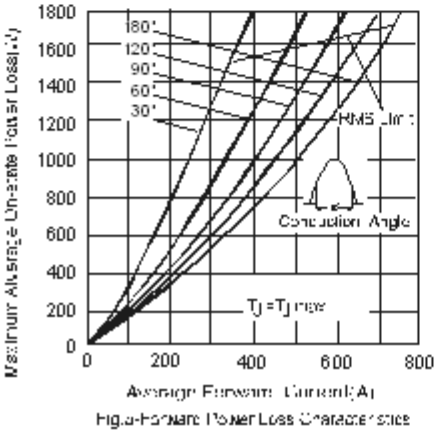


Fig.5-Forward Power Loss Characteristics

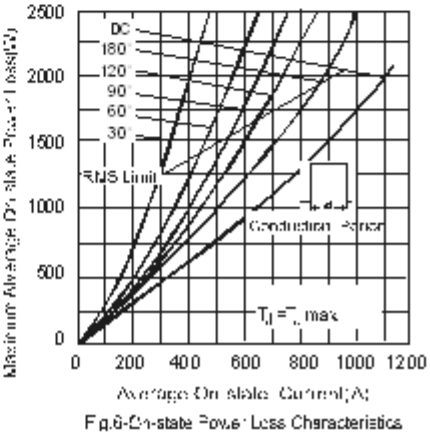


Fig.6-On-state Power Loss Characteristics

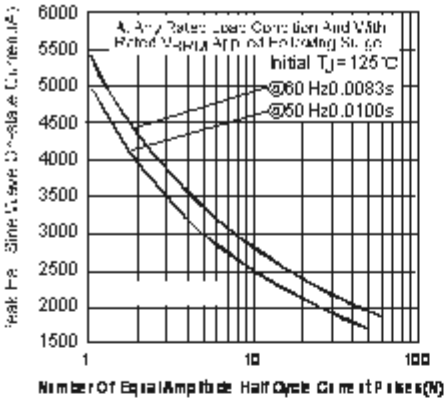


Fig.7-Maximum Non-Repetitive Surge Current
Single and Double Side Cooled

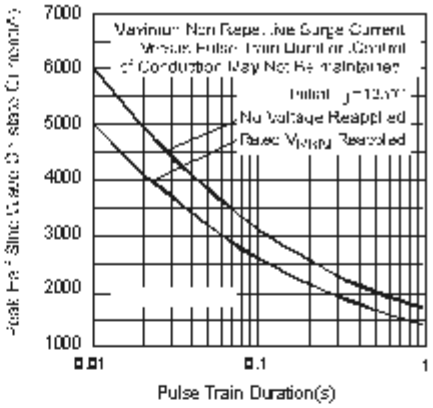


Fig.8-Maximum Non-Repetitive Surge Current
Single and Double Side Cooled

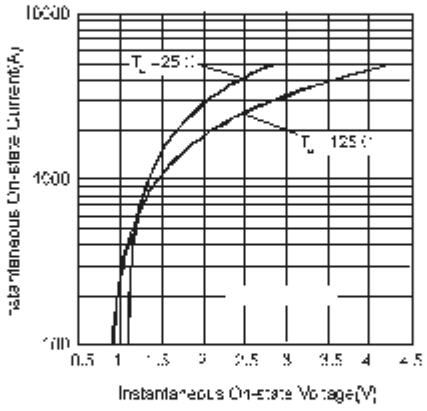


Fig.9 On-state Voltage Drop Characteristics

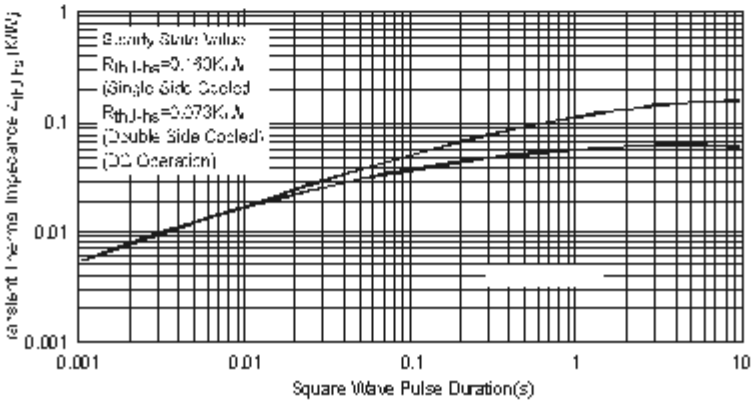


Fig.10-Thermal Impedance Z_{thJS} Characteristics