

Thyristors

DCR1003



Technical Data

Typical applications : D.C. Motor control, Controlled rectifiers, High power drives.

Type No.	V_{RRM} (Volts)	V_{RSM} (Volts)
DCR1003/06	600	700
DCR1003/08	800	900
DCR1003/10	1000	1100
DCR1003/12	1200	1300
DCR1003/14	1400	1500
DCR1003/16	1600	1700
DCR1003/18	1800	1900

Features

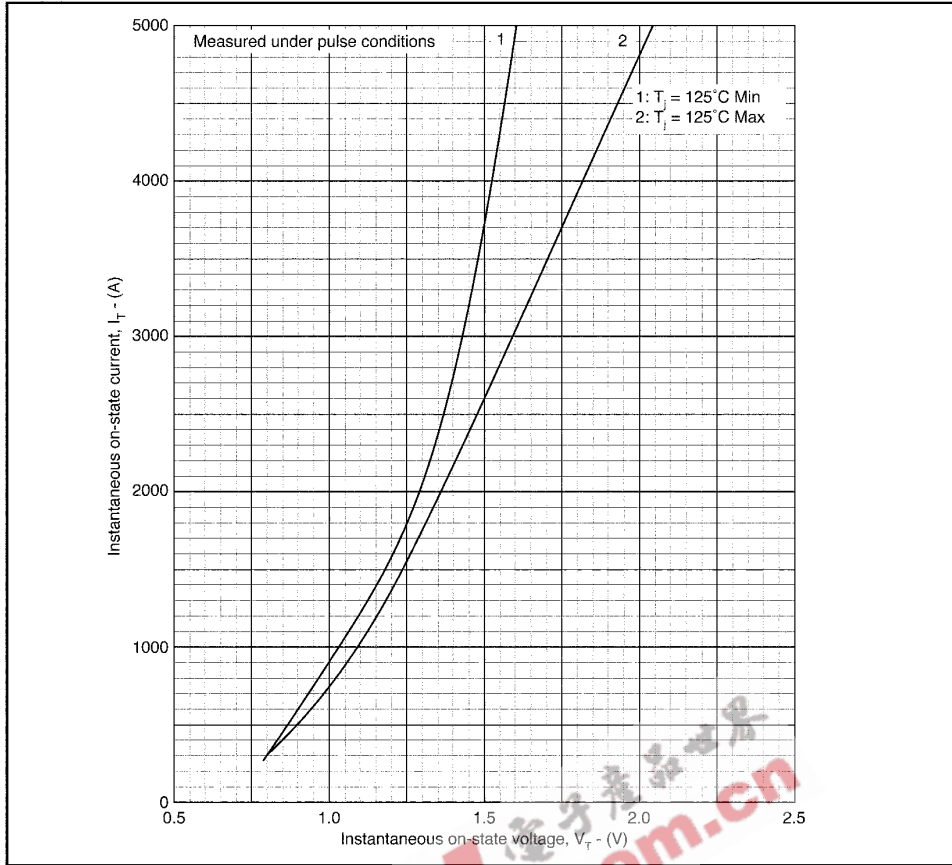
- Double side cooling.
- Voltage grade upto 1800V.
- Weight 500gm (Approx.)

Symbol	Conditions	Values
$I_{T(AV)}$	Half wave resistive load $T_C = 60^\circ\text{C}$	1511 A
I_{TSM}	$T_{VJ} = 125^\circ\text{C}; 10\text{ ms half sine, } V_R = 50\% V_{RRM}$	21 K.A.
	$T_{VJ} = 125^\circ\text{C}; 10\text{ ms half sine, } V_R = 0$	26.25 K.A.
I^2T	$T_{VJ} = 125^\circ\text{C}; 10\text{ ms half sine, } V_R = 50\% V_{RRM}$	2210000 A ² s
	$T_{VJ} = 125^\circ\text{C}; 10\text{ ms half sine, } V_R = 0$	3440000 A ² s
I_{GT}	$T_{VJ} = 25^\circ\text{C}; V_{DRM} = 5V$	200 mA
V_{GT}	$T_{VJ} = 25^\circ\text{C}; V_{DRM} = 5V$	3.5 V
dv/dt	$T_{VJ} = 125^\circ\text{C}; \text{Voltage} = 67\% V_{DRM}$	*200 V/ μ S
$[di/dt]_{CR}$	Repetitive 50 Hz	500 A/ μ S
V_T	$T_{VJ} = 25^\circ\text{C}; I_T = 2900\text{ A}$	1.50 V max
V_o	$T_{VJ} = 125^\circ\text{C}$	0.86 V
R_o	$T_{VJ} = 125^\circ\text{C}$	0.25 m
I_{RRM}/I_{DRM}	$T_{VJ} = 130^\circ\text{C}$	100 mA
I_H	$T_{VJ} = 25^\circ\text{C}; R_{6-K} =$	230 mA
I_L	$T_{VJ} = 25^\circ\text{C}; V_D = 5V$	350 mA
$R_{th(i-c)}$	dc	0.022 $^\circ\text{C/W}$
$R_{th(i-h)}$		0.004 $^\circ\text{C/W}$
T_{VJ}		125 $^\circ\text{C}$
T_{STG}		-40 to + 125 $^\circ\text{C}$
Mounting Force		20-22 KN
Case outline		F

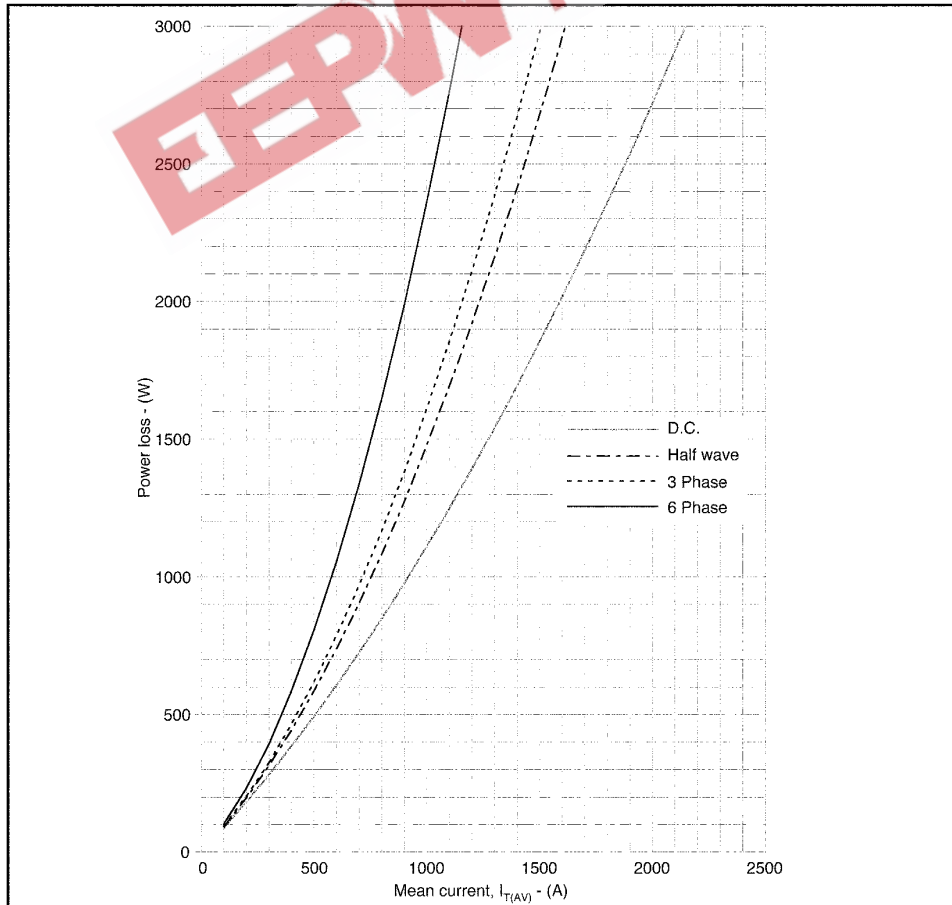
* Higher dv/dt selection available.



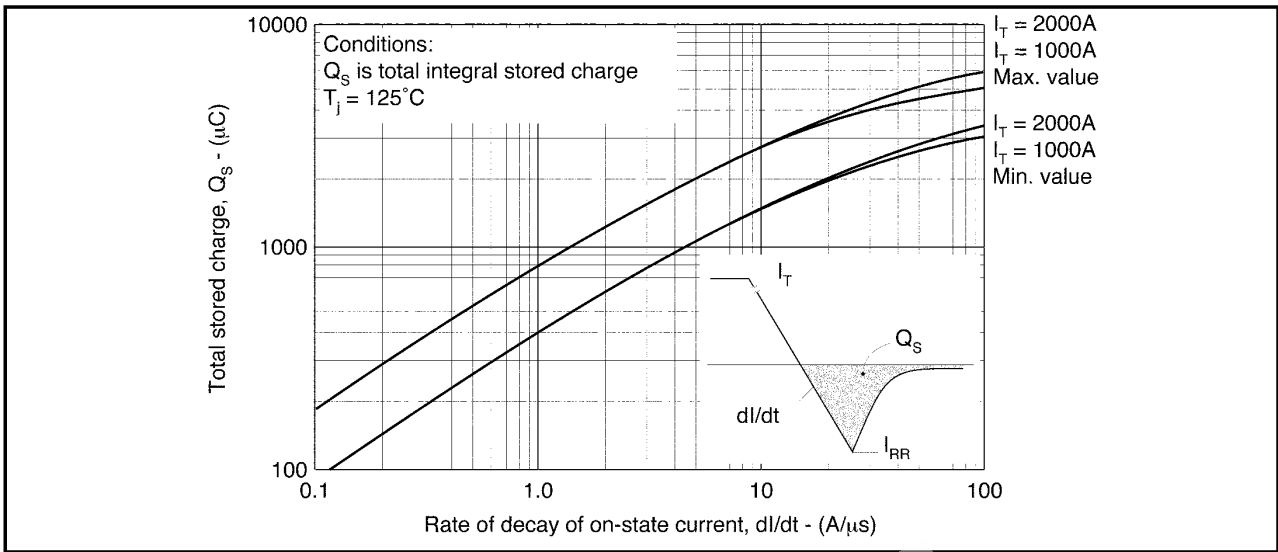
CURVES



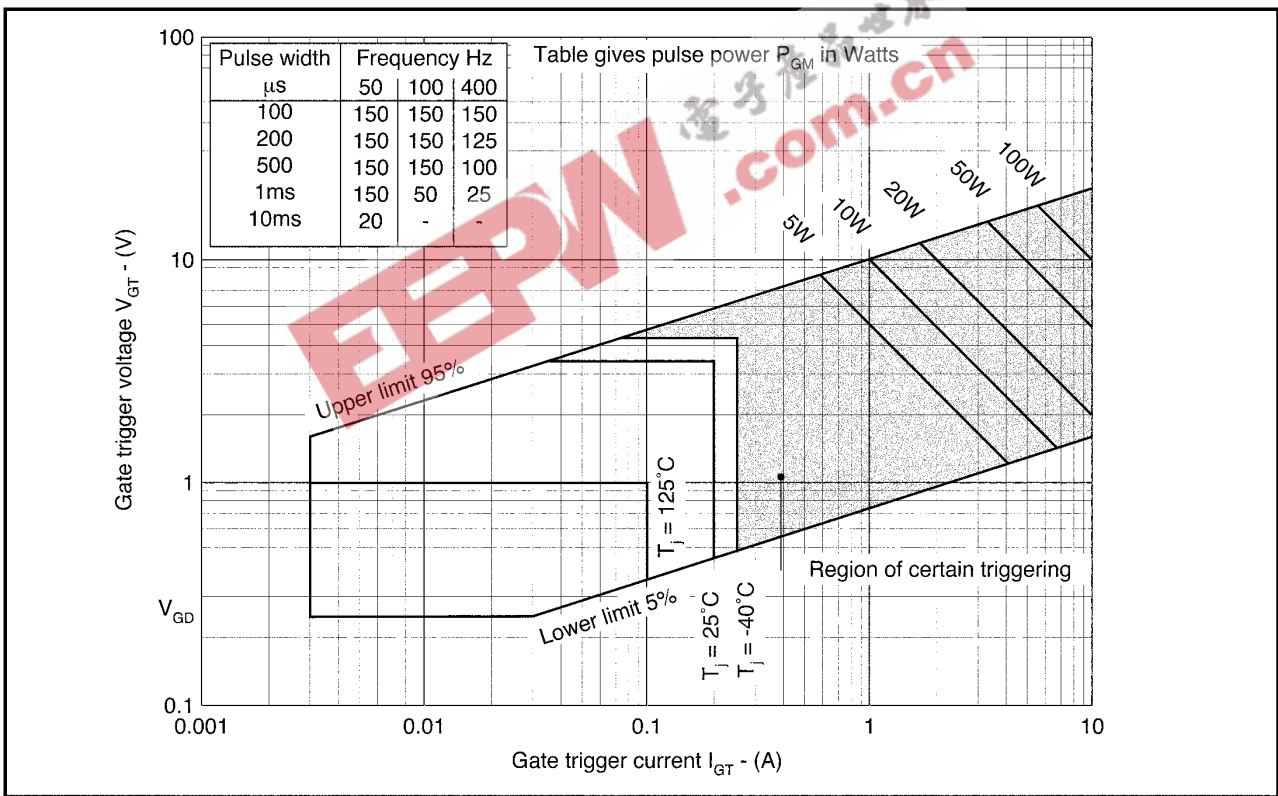
Maximum (limit) on-state characteristics



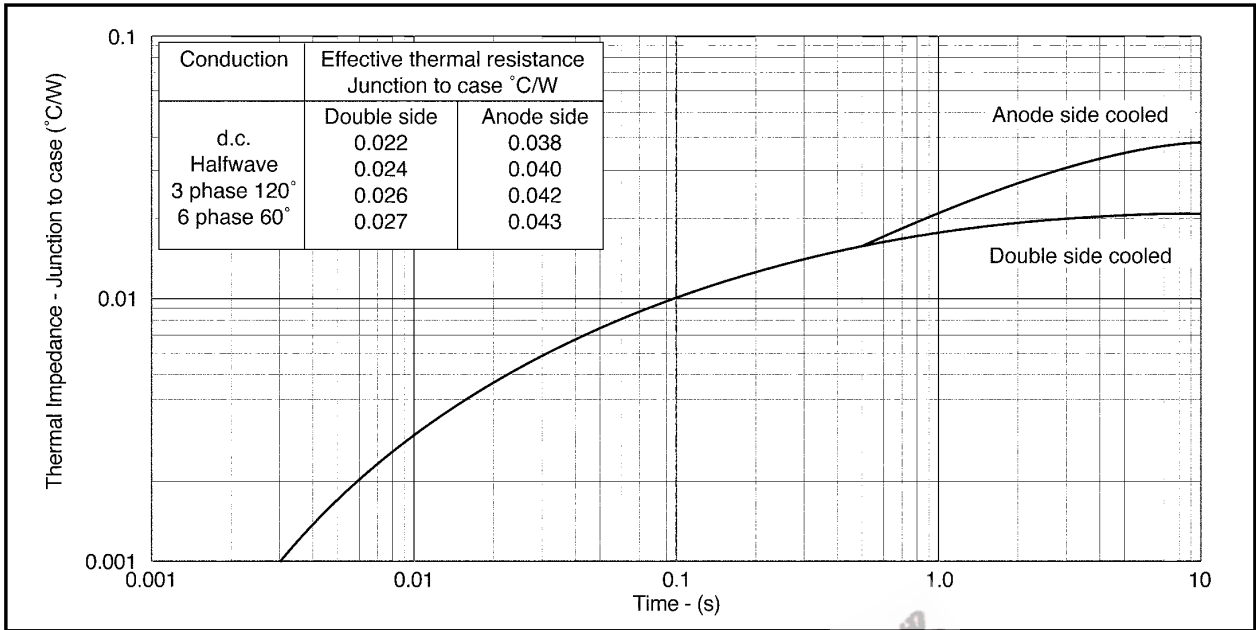
Dissipation curves



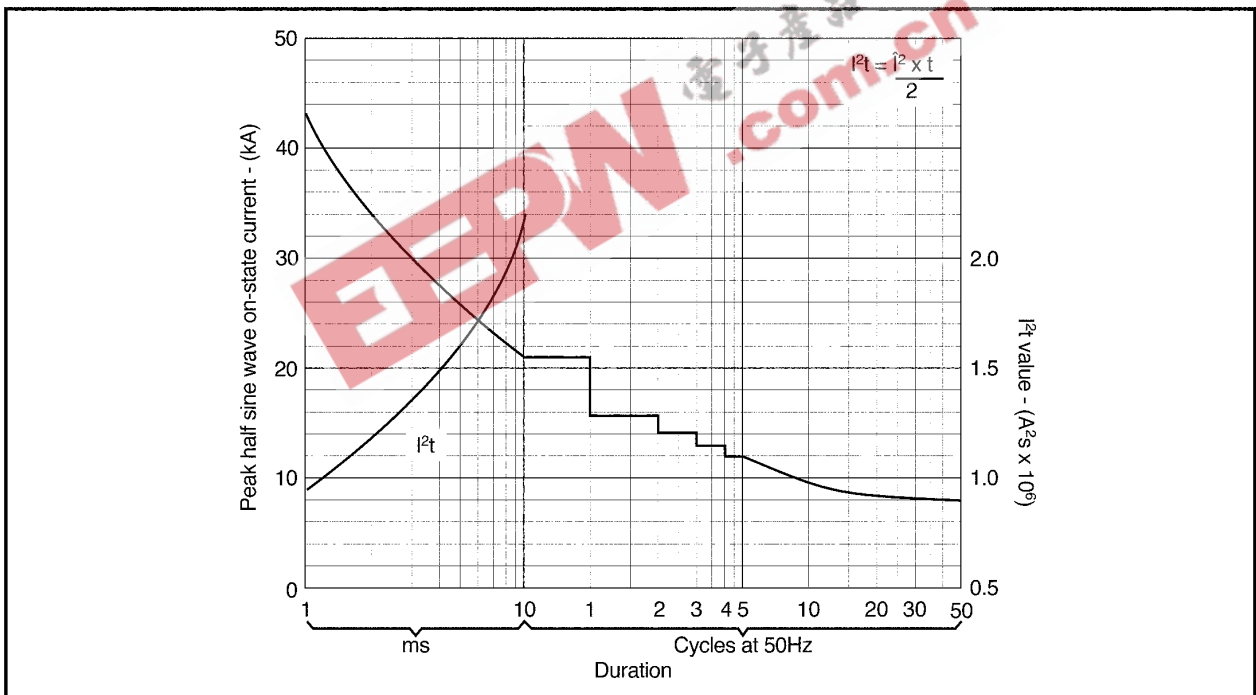
Stored charge



Gate characteristics



Transient thermal impedance - junction to case - (°C/W)



Surge (non-repetitive) on-state current vs time (with 50% V_{RRM} at $T_{case} = 125^\circ C$)

PACKAGE DETAILS

DO NOT SCALE

