

Rectifier Diode



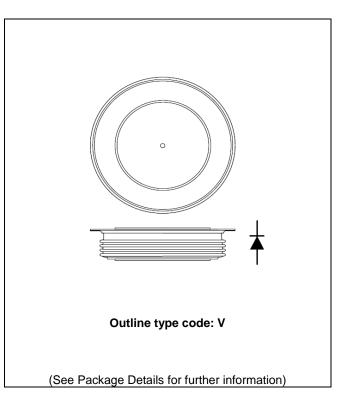
DS6003 - 1 March 2011 (LN28190)

FEATURES

- Double Side Cooling
- High Surge Capability

KEY PARAMETERS

V _{RRM}	2200V
I _{F(AV)}	4460A
I _{FSM}	56400A



VOLTAGE RATINGS

Part and Ordering Number	Repetitive Peak Voltages V _{RRM} V	Conditions
DRD4460V22 DRD4460V20 DRD4460V18 DRD4460V16	2200 2000 1800 1600	V _{RSM} = V _{RRM} +100V

ORDERING INFORMATION

When ordering, select the required part number shown in the Voltage Ratings selection table.

For example:

DRD4460V22 for a 2200V device

Fig. 1 Package outline



CURRENT RATINGS

T_{case} = 75°C unless stated otherwise

Symbol	Parameter	Test Conditions	Max.	Units
Double Sid	de Cooled			
I _{F(AV)}	Mean forward current	Half wave resistive load	5430	А
I _{F(RMS)}	RMS value	-	8530	А
١ _F	Continuous (direct) on-state current	-	7680	А

T_{case} = 100°C unless stated otherwise

Symbol	Parameter	Test Conditions	Max.	Units		
Double Si	Double Side Cooled					
I _{F(AV)}	Mean forward current	Half wave resistive load	4460	А		
I _{F(RMS)}	RMS value	-	7000	А		
IF	Continuous (direct) on-state current	-	6310	А		

SURGE RATINGS

Symbol	Parameter	Parameter Test Conditions		Units
I _{FSM}	Surge (non-repetitive) on-state current	10ms half sine, $T_{case} = 175^{\circ}C$	56.4	kA
l ² t	I ² t for fusing	V _R = 0	15.91	MA ² s

THERMAL AND MECHANICAL RATINGS

Symbol	Parameter	Test Conditions		Min.	Max.	Units
R _{th(j-c)}	Thermal resistance – junction to case	Double side cooled	DC	-	0.01	°C/W
R _{th(c-h)}	Thermal resistance – case to heatsink	Double side cooled	DC	-	0.003	°C/W
T _{vj}	Virtual junction temperature	Blocking V _{DRM} / _{VRRM}		-40	175	°C
T _{stg}	Storage temperature range			-40	175	°C
F _m	Clamping force			50	62	kN

CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min.	Max.	Units
V _{FM}	Forward voltage	At 3000A peak, T _{case} = 25°C	-	1.15	V
I _{RM}	Peak reverse current	At V _{DRM,} T _{case} = 175°C	-	250	mA
Qs	Total stored charge	I _F = 4000A, dI _{RR} /dt =10A/μs T _{case} = 175°C, V _R =100V	-	5000	μC
V _{TO}	Threshold voltage	At T _{vj} = 175°C	-	0.81	V
r _T	Slope resistance	At T _{vj} = 175°C	-	0.059	mΩ

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CURVES

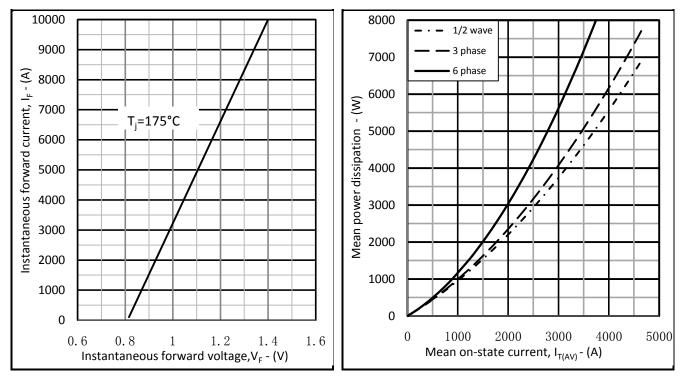
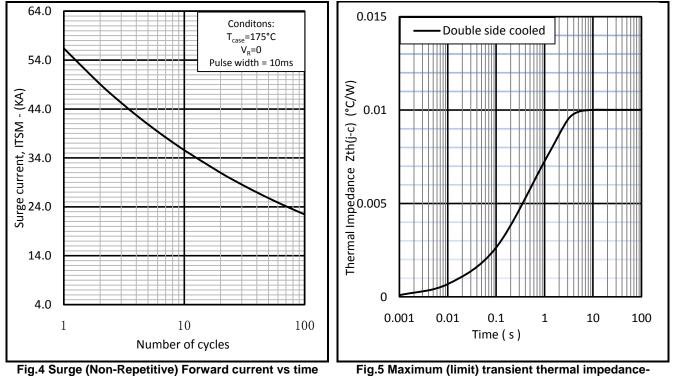


Fig.2 Maximum forward characteristics

Fig.3 Dissipation curves

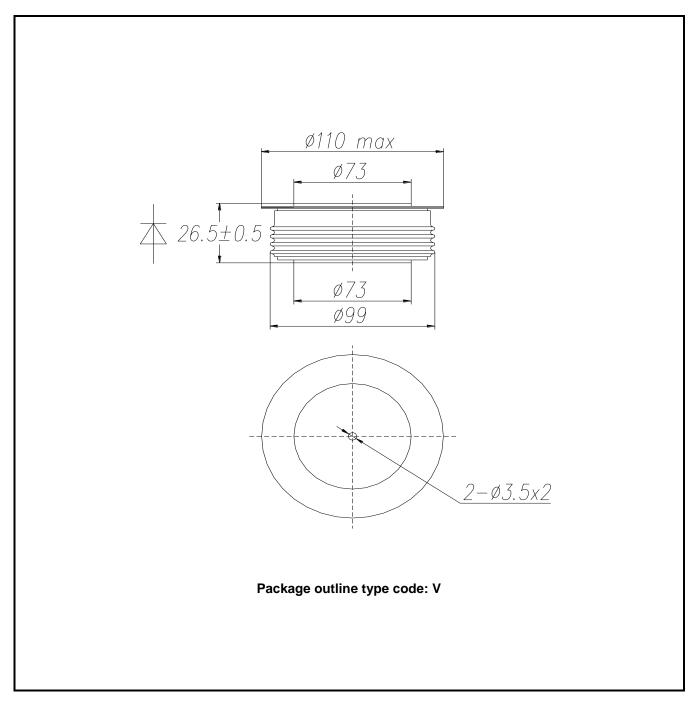


junction to case



PACKAGE DETAILS

For further package information, please contact Customer Services. All dimensions in mm, unless stated otherwise. DO NOT SCALE.



Note:

Some packages may be supplied with gate and or tags.



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