

WESTCODE SEMICONDUCTORS

Series

SWxxC/DXC32C

Capsule Rectifier Diode

Consists of a diffused silicon element mounted in an hermetic ceramic cold welded capsule. Available in industry standard and thin housings.

Ratings	Unless otherwise stated Tj = 190°C	Maximum Limits							Units
		Voltage Codes							
V _{RRM}	Repetitive peak reverse voltage.	02	04	06	08	10	12	14	V
V _{RSM}	Non-repetitive peak reverse voltage.	300	500	700	900	1100	1300	1500	V

I _{F(AV)}	Average forward current	Half sine wave	55°C heatsink temperature (double side cooled)					8410	A
			100°C heatsink temperature (single side cooled)					3935	A
I _{F(RMS)}	R.M.S forward current		25°C heatsink temperature, double side cooled					15025	A
I _F	Continuous forward current		25°C heatsink temperature, double side cooled					12920	A
I _{FSM(1)}	Peak one-cycle surge	10ms duration, 60% V _{RRM} re-applied						72.0	KA
I _{FSM(2)}	Peak one-cycle surge	10ms duration, V _R ≤ 10 volts						79.2	KA
I ² t ₍₂₎	Maximum permissible surge energy	10ms duration, V _R ≤ 10 volts						31.4 x 10 ⁶	A ² s
		3ms duration, V _R ≤ 10 volts						22.5 x 10 ⁶	A ² s
Tj	Operating temperature range							-55 to +190	°C
T _{stg}	Storage temperature range							-55 to +200	°C

Characteristics		Unless otherwise indicated Tj = 190°C		
V _{FM}	Peak forward voltage	I _F = 6800 A	0.93	V
V _O	Forward conduction threshold voltage		0.67	V
r	Forward conduction slope resistance		0.038	mΩ
I _{RRM}	Repetitive peak reverse current	At V _{RRM}	100.0	mA
R _{th(j-hs)}	Thermal resistance, junction to heat sink.	Double side cooled	0.011	°C/W
		Single side cooled	0.022	°C/W

Ordering Information (Please quote device code as explained below - 10 digits)

S	W	• •	• X C	3 2 C
Fixed type code	Voltage Code (see ratings)	CXC - Thick Housing DXC - Thin Housing	Fixed Type Code	

Typical code : SW10CXC32C, 1000 V_{RRM}

Details of a full range of capsule mounting clamps are available - ask for brochure.

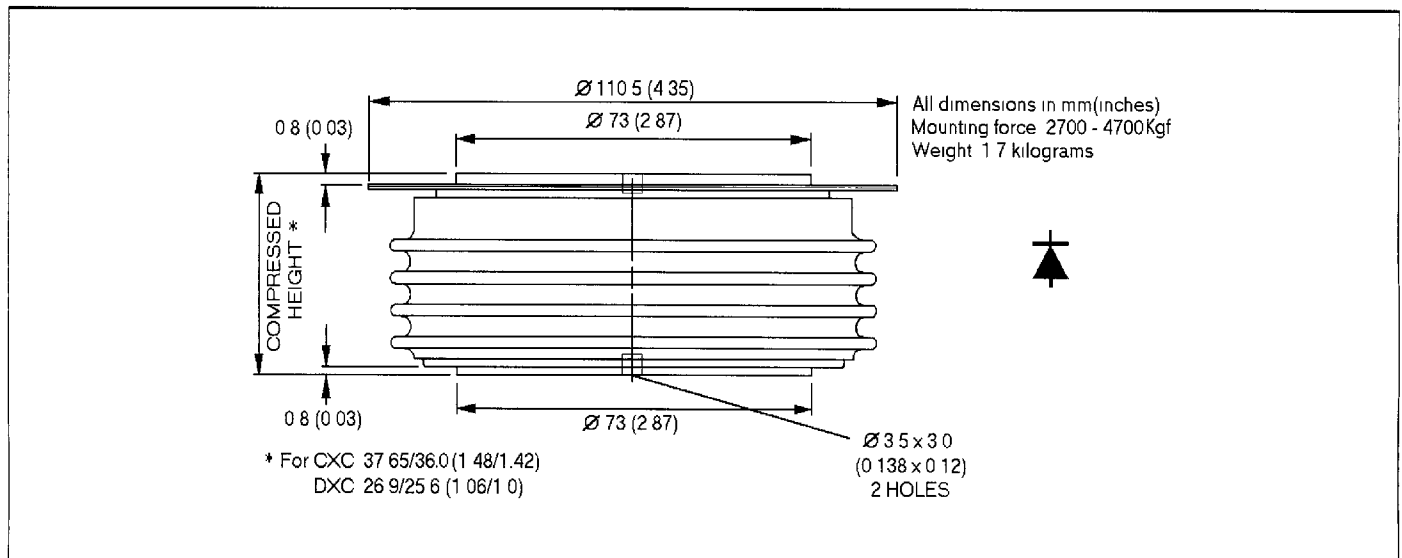


Figure 1. Dissipation/Sink Temperature v. Mean Forward Current.

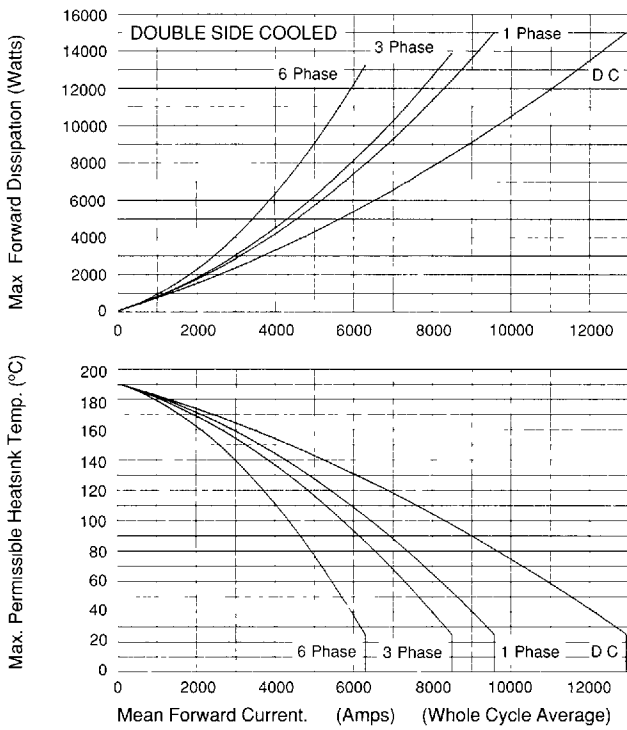


Figure 2. Dissipation/Sink Temperature v. Mean Forward Current.

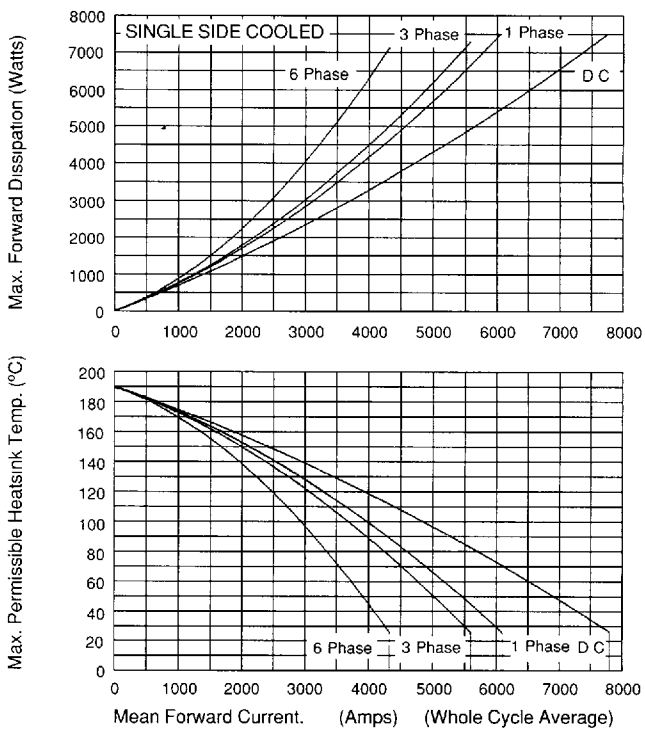
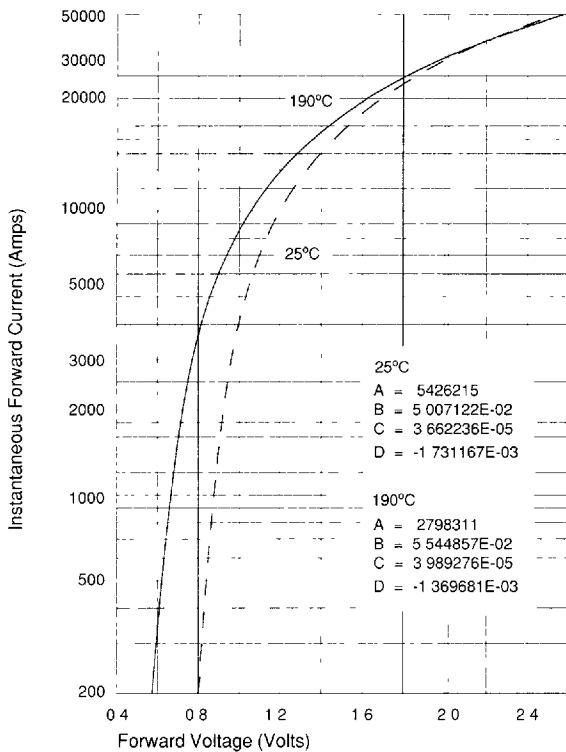


Figure 3. Limit Forward Characteristic at 190°C.



Forward volt-drop calculation:
 $V_F = A + B \ln I_F + C I_F + D \sqrt{I_F}$

Figure 4. Junction to Sink Transient Thermal Impedance.

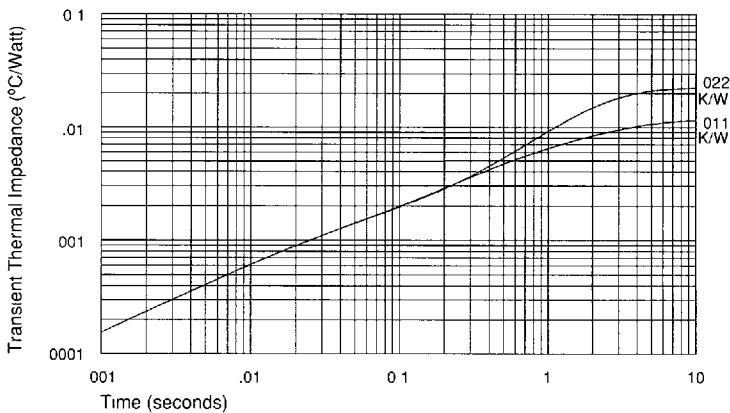
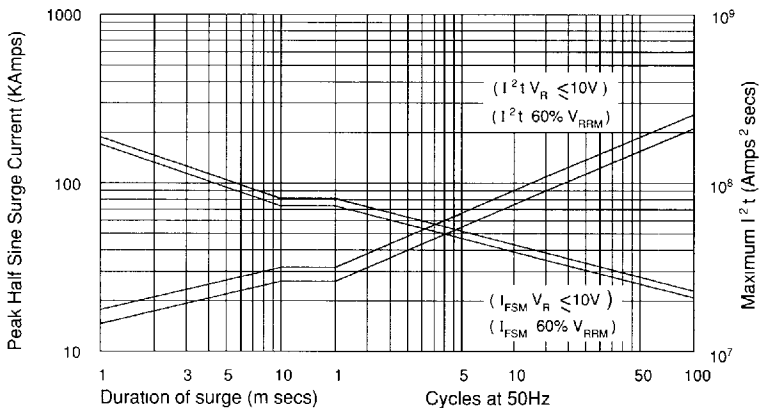


Figure 5. Non-Repetitive Surge Current at Initial Junction Temperature 190°C.



In the interest of product improvement, Westcode reserves the right to change specifications at any time without notice © Westcode Semiconductors Ltd



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