

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 $T_j = 175^\circ\text{C}$	Maximum Limits										Units
	Voltage Codes	02	04	06	08	10	12	14	16	18	20	
V_{RRM}	Repetitive peak reverse voltage.	200	400	600	800	1000	1200	1400	1600	1800	2000	V
V_{RSM}	Non-repetitive peak reverse voltage.	300	500	700	900	1100	1300	1500	1700	1900	2100	V
$I_{F(AV)}$	Average forward current	Half sine wave $\left\{ \begin{array}{l} 55^\circ\text{C heatsink temperature} \\ \text{(double side cooled)} \\ 100^\circ\text{C heatsink temperature} \\ \text{(single side cooled)} \end{array} \right.$									3270	A
$I_{F(RMS)}$	R.M.S forward current	25°C heatsink temperature, double side cooled									5920	A
I_F	Continuous forward current	25°C heatsink temperature, double side cooled									5140	A
$I_{FSM(1)}$	Peak one-cycle surge	10ms duration, 60% V_{RRM} re-applied									33.0	KA
$I_{FSM(2)}$	Peak one-cycle surge	10ms duration, $V_R \leq 10$ volts									37.0	KA
$I^2 t_{(2)}$	Maximum permissible surge energy	10ms duration, $V_R \leq 10$ volts									6.85×10^6	A^2s
		3ms duration, $V_R \leq 10$ volts									5.02×10^6	A^2s
T_j	Operating temperature range										-55 to $+175$	$^\circ\text{C}$
T_{stg}	Storage temperature range										-55 to $+200$	$^\circ\text{C}$

Characteristics	Unless otherwise indicated $T_j = 175^\circ\text{C}$			
V_{FM}	Peak forward voltage	$I_F = 6400$ A	1.47	V
V_O	Forward conduction threshold voltage		0.73	V
r	Forward conduction slope resistance		0.116	$\text{m}\Omega$
I_{RRM}	Repetitive peak reverse current	At V_{RRM}	50.0	mA
$R_{th(j-hs)}$	Thermal resistance, junction to heat sink.	Double side cooled	0.022	$^\circ\text{C/W}$
		Single side cooled	0.044	$^\circ\text{C/W}$

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

S	W	• •	• X C	1 4 C
Fixed type code	Voltage Code (see ratings)		CXC - Thick Housing DXC - Thin Housing	Fixed Type Code

Typical code : SW16CXC14C, 1600 V_{RRM}

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

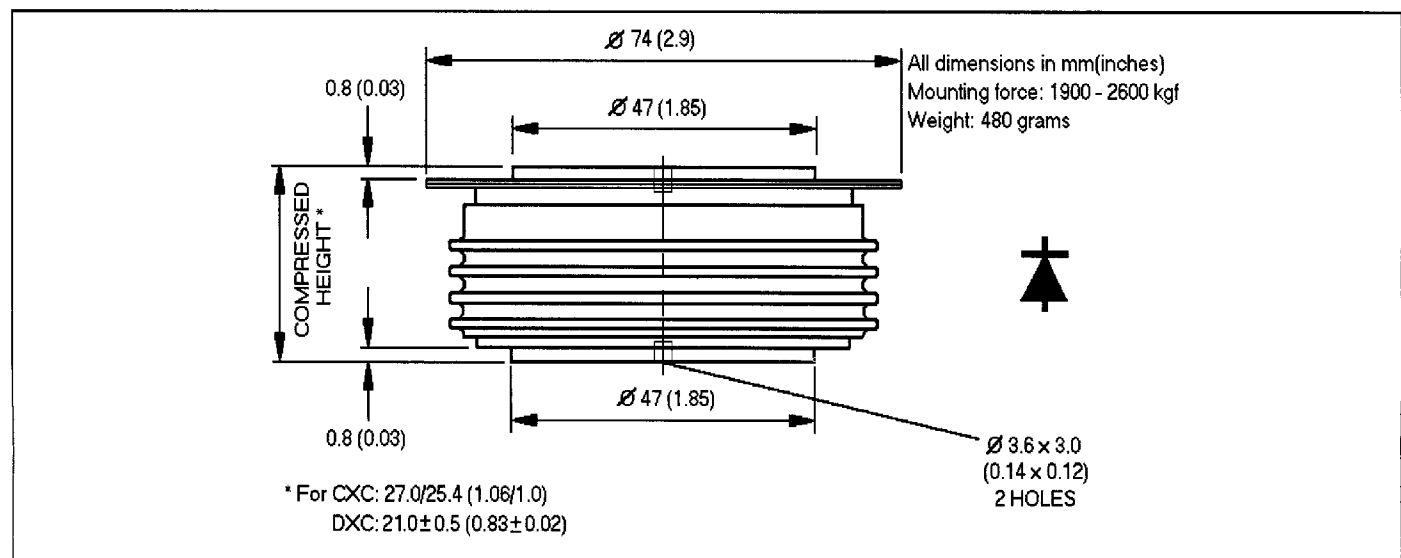


Figure 1. Dissipation/Sink Temperature v. Mean Forward Current.

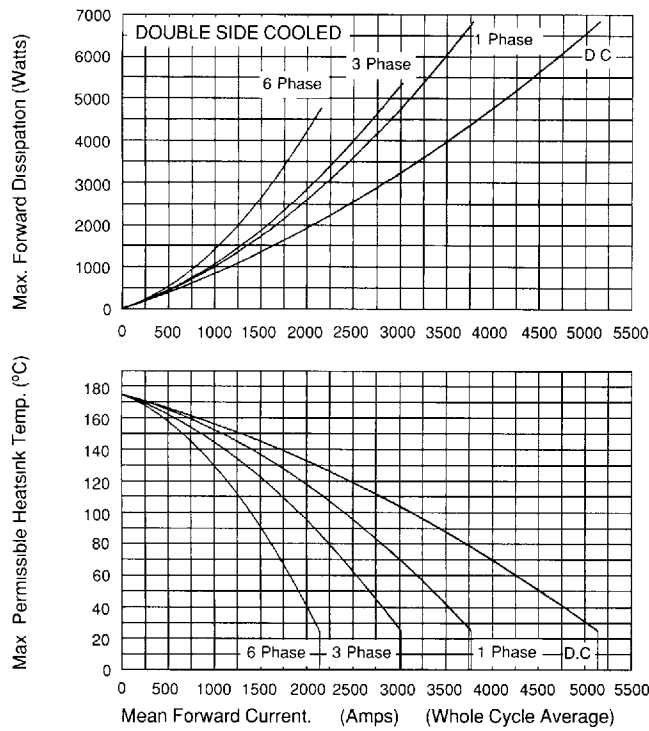


Figure 2. Dissipation/Sink Temperature v. Mean Forward Current.

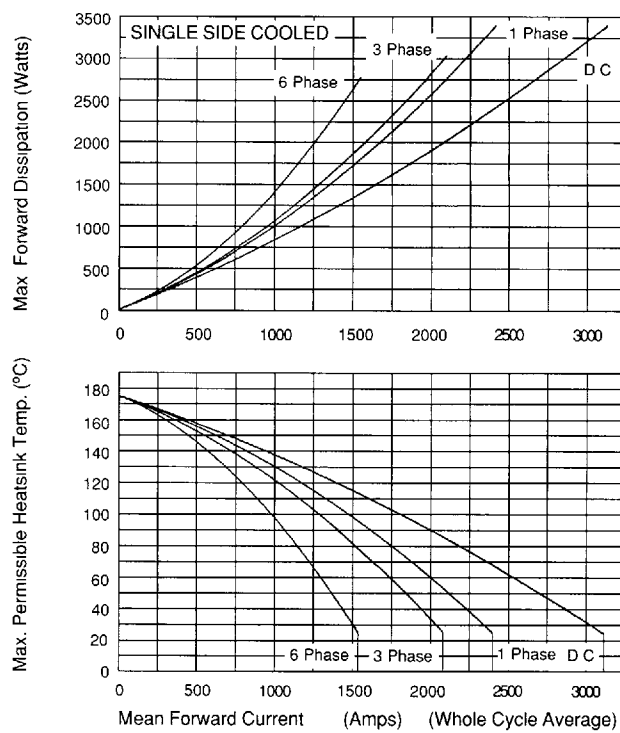


Figure 3. Limit Forward Characteristic at 175°C.

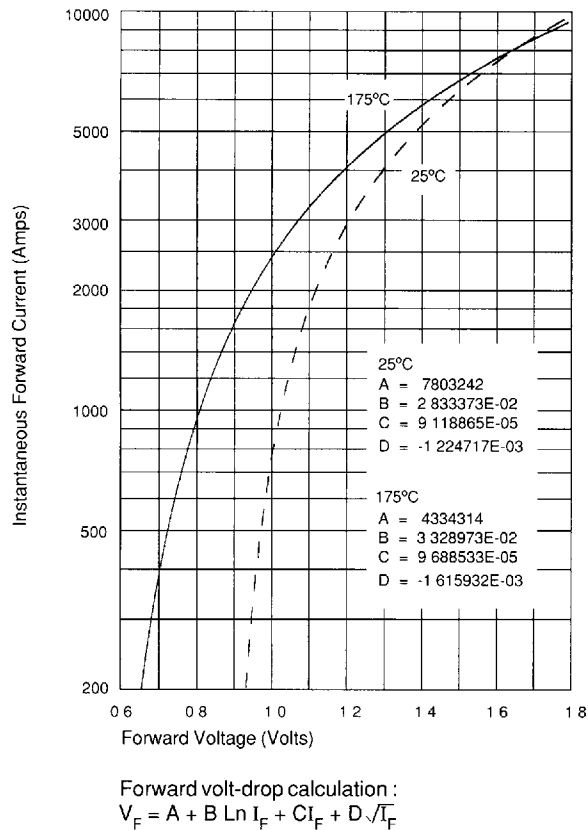


Figure 4. Junction to Sink Transient Thermal Impedance.

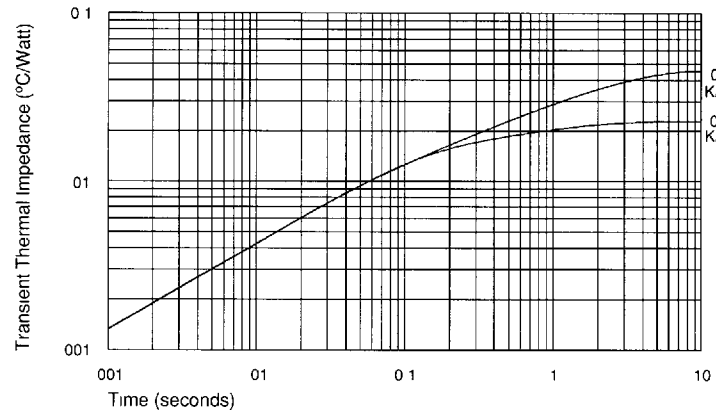
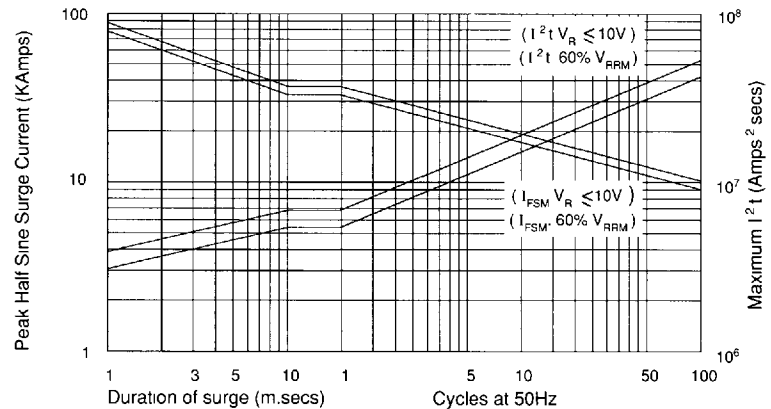


Figure 5. Non-Repetitive Surge Current at Initial Junction Temperature 175°C.



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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