

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 $T_j = 160^\circ\text{C}$	Maximum Limits						Units
	Voltage Codes	16	18	20	22	24	25	
V_{RRM}	Repetitive peak reverse voltage.	1600	1800	2000	2200	2400	2500	V
V_{RSM}	Non-repetitive peak reverse voltage.	1700	1900	2100	2300	2500	2600	V

$I_{F(AV)}$	Average forward current	Half sine wave	55°C heatsink temperature (double side cooled)	2630	A
			100°C heatsink temperature (single side cooled)	1125	A
$I_{F(RMS)}$	R.M.S forward current	25°C heatsink temperature, double side cooled		4830	A
I_F	Continuous forward current	25°C heatsink temperature, double side cooled		4220	A
$I_{FSM(1)}$	Peak one-cycle surge	10ms duration, 60% V_{RRM} re-applied		28.0	KA
$I_{FSM(2)}$	Peak one-cycle surge	10ms duration, $V_R \leq 10$ volts		30.8	KA
$I^2 t_{(2)}$	Maximum permissible surge energy	10ms duration, $V_R \leq 10$ volts		4.74×10^6	$A^2 s$
		3ms duration, $V_R \leq 10$ volts		3.45×10^6	$A^2 s$
T_j	Operating temperature range			-55 to +160	°C
T_{stg}	Storage temperature range			-55 to +190	°C

Characteristics Unless otherwise indicated $T_j = 160^\circ\text{C}$					
V_{FM}	Peak forward voltage	$I_F = 4500$ A		1.50	V
V_O	Forward conduction threshold voltage			0.78	V
r	Forward conduction slope resistance			0.16	m Ω
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	°C/W
		Single side cooled		0.044	°C/W

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

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

Typical code : SW20CXC11C, 2000 V_{RRM}

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

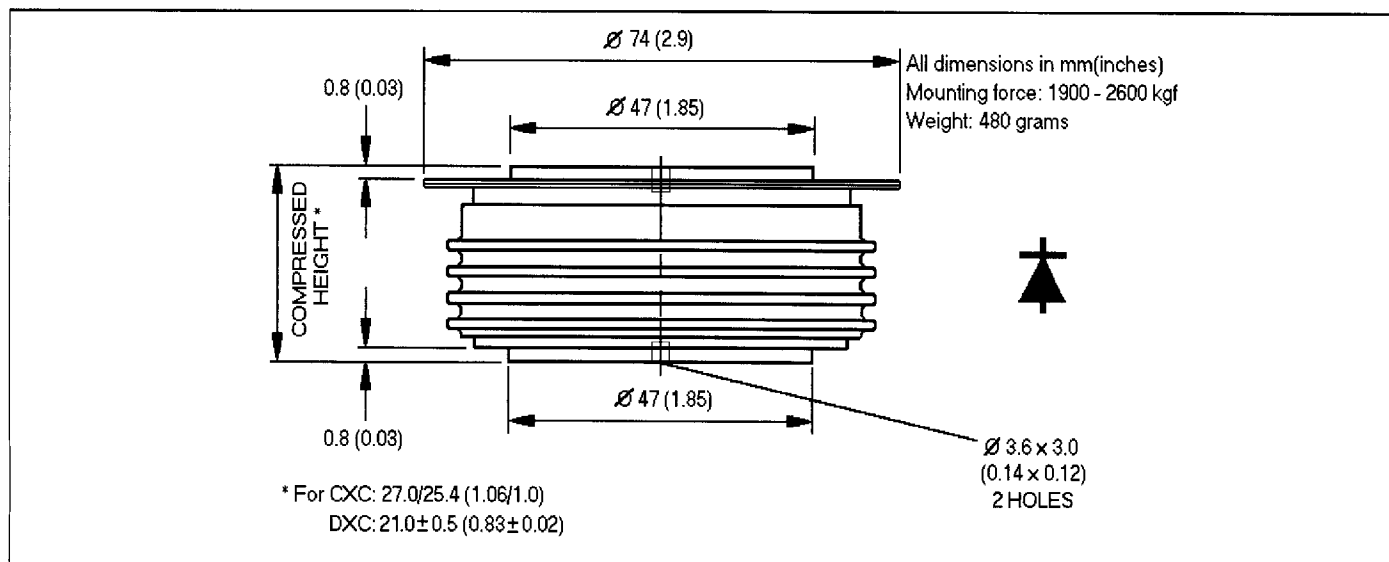


Figure 1. Dissipation/Sink Temperature v. Mean Forward Current.

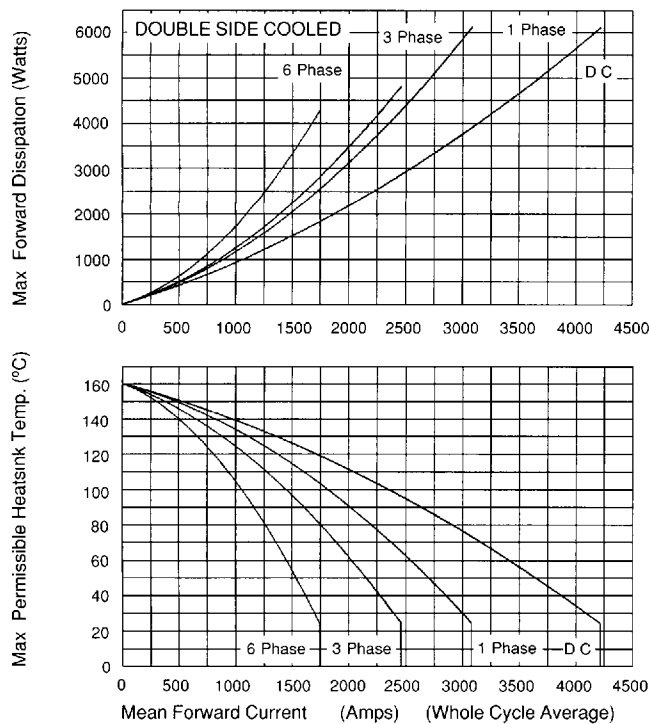


Figure 2. Dissipation/Sink Temperature v. Mean Forward Current.

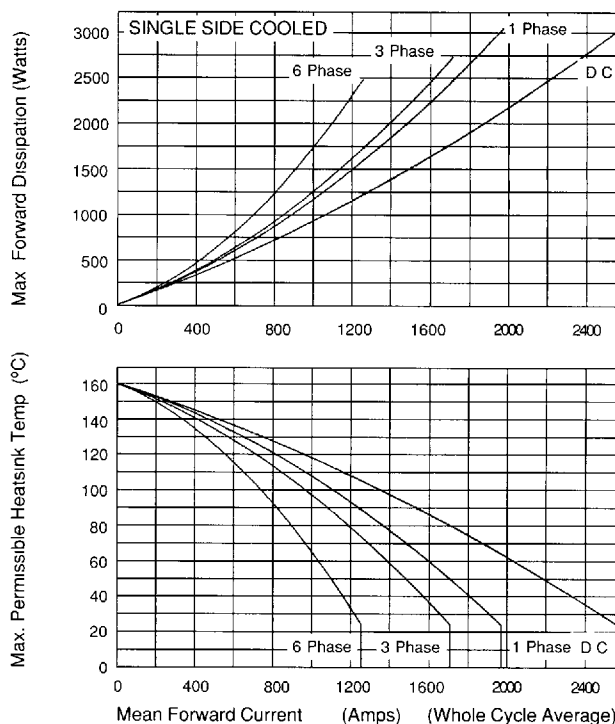


Figure 3. Limit Forward Characteristic at 160°C.

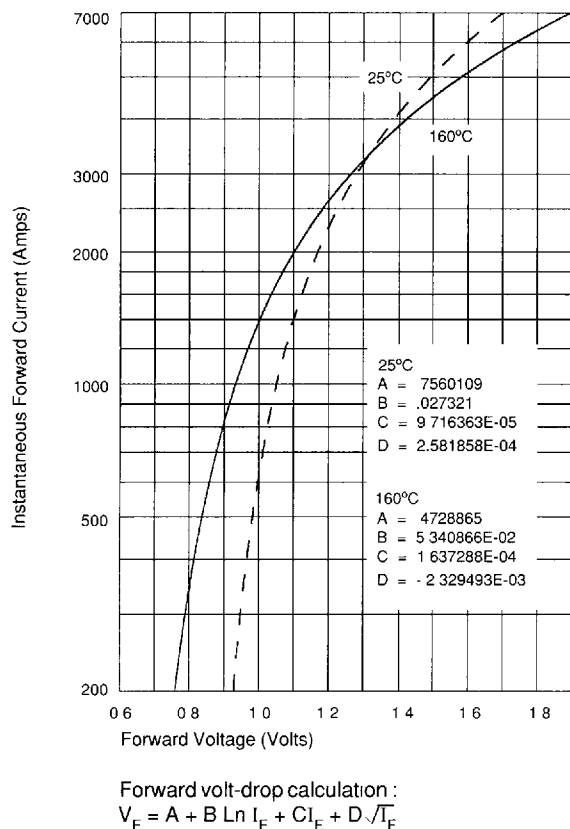


Figure 4. Junction to Sink Transient Thermal Impedance.

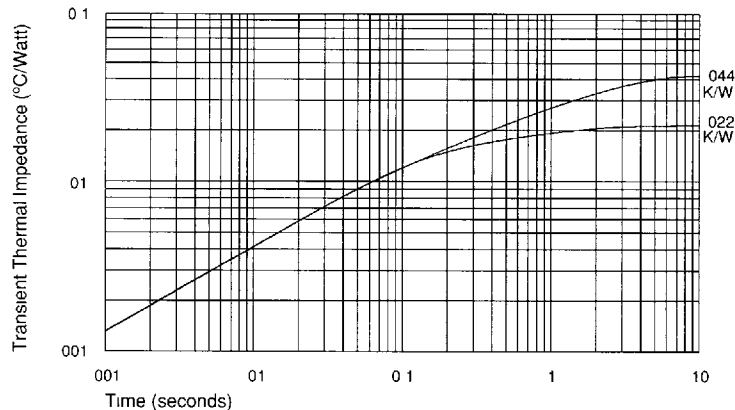
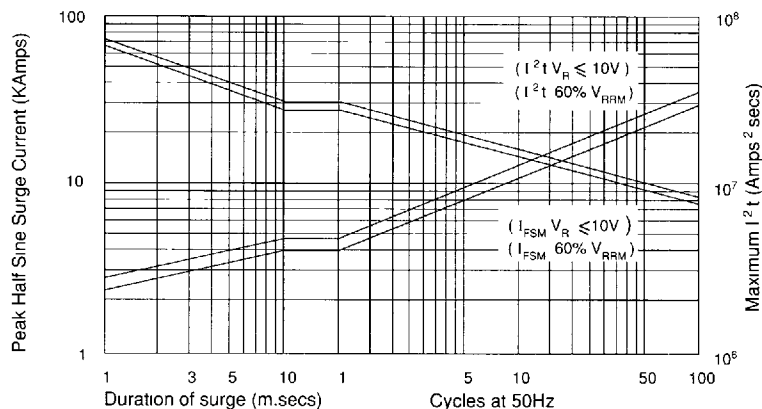


Figure 5. Non-Repetitive Surge Current at Initial Junction Temperature 160°C.



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

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