



WESTCODE SEMICONDUCTORS

 Technical
Publication

DC950

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Ceramic Capsule Silicon Diodes Type CXC950

2070 amperes average: up to 2400 volts V_{RRM}

RATINGS Maximum values at 160°C, T_j , unless stated otherwise

RATING	CONDITIONS	SYMBOL	
Average forward current	Half sine wave $\left\{ \begin{array}{l} 55^\circ\text{C heatsink temperature} \\ \text{(double side cooled)} \\ 100^\circ\text{C heatsink temperature} \\ \text{(single side cooled)} \end{array} \right.$	$I_{F(AV)}$	2070A 880A
R.M.S current	25°C heatsink temperature, double side cooled	$I_F(RMS)$	3815A
DC forward current	25°C heatsink temperature, double side cooled	I_F	3330A
Peak one-cycle surge (non-repetitive) of forward current	8.3ms duration $\left\{ \begin{array}{l} 60\% V_{RRM} \text{ re-applied} \\ V_R \leq 10 \text{ volts} \end{array} \right.$	$I_{FSM}(1)$ $I_{FSM}(2)$	27030A 29730A
Maximum permissible surge energy	8.3ms duration $\left\{ \begin{array}{l} 60\% V_{RRM} \text{ re-applied} \\ V_R \leq 10 \text{ volts} \end{array} \right.$ 3ms duration $V_R \leq 10 \text{ volts}$	$I^2t(1)$ $I^2t(2)$	3152000A ² s 3800000A ² s 1872000A ² s
Operating temperature range		T_{hs}	-30 +160°C
Storage temperature		T_{stg}	-40 +200°C

CHARACTERISTICS Maximum values at 160°C, T_j , unless stated otherwise

CHARACTERISTIC	CONDITIONS	SYMBOL	
Peak forward voltage drop	At 4500A, I_{FM}	V_{FM}	1.68V
Forward conduction threshold voltage		V_O	0.78V
Forward conduction slope resistance		r	0.2mΩ
Peak reverse current	At V_{RRM}	I_{RRM}	50mA
Thermal resistance, junction to heat sink for a device with a maximum forward volt-drop characteristic	Capsule Single side cooled Double side cooled	$R_{th(j-hs)}$	0.056°C/W 0.028°C/W

VOLTAGE CODE	16	18	20	22	24				
Repetitive voltage V_{RRM}	1600	1800	2000	2200	2400				
Non-repetitive voltage V_{RSM}	1700	1900	2100	2300	2500				

ORDERING INFORMATION

(Please quote device code as explained below – 10 digits)

S	W	●	●	C	X	C	9	5	0
Fixed basic code	Voltage Code (see above)			Fixed outline code DO-200AC cold weld capsule			Fixed type code		

Typical code: SW22CXC950 = 2200V_{RRM} type CXC950 diode

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

DC950

34 DE 9709955 0001492 7

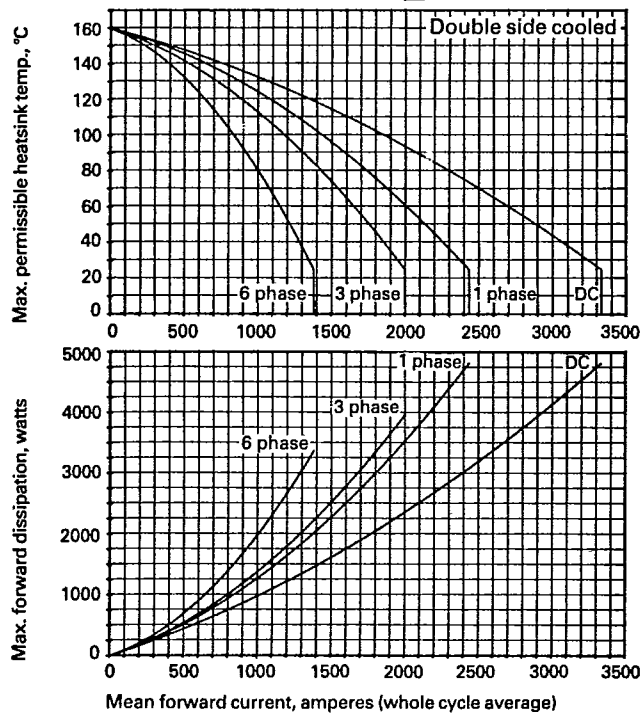


Figure 1 Dissipation/sink temperature v. mean forward current

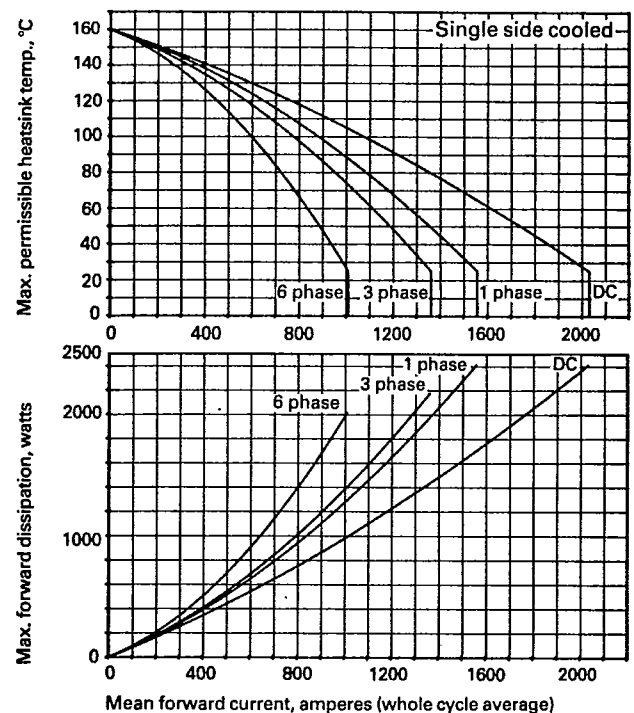


Figure 2 Dissipation/sink temperature v. mean forward current

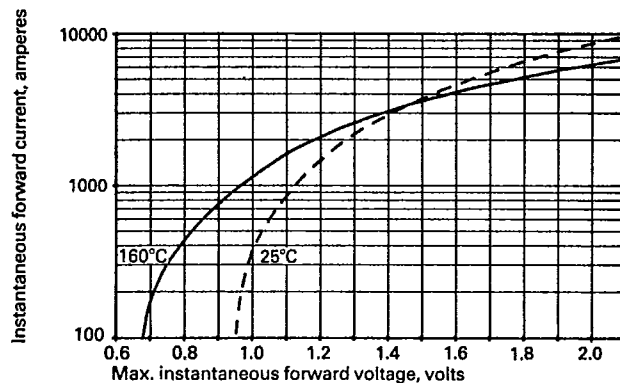


Figure 3 Forward voltage characteristic

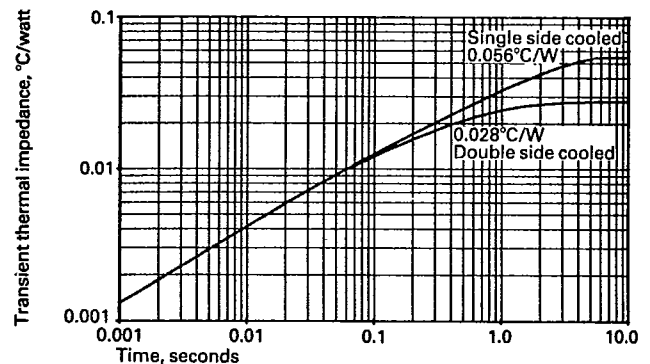


Figure 4 Transient thermal impedance, junction to heatsink

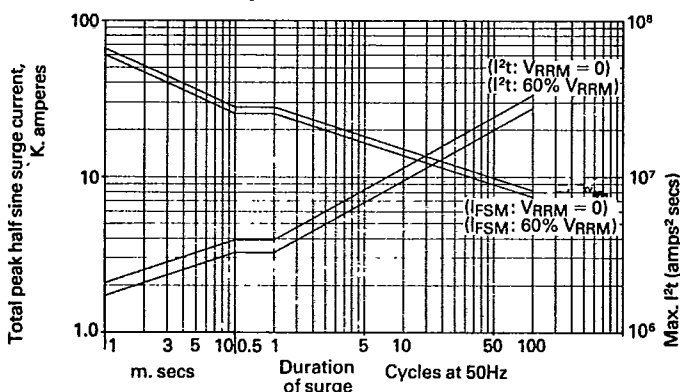
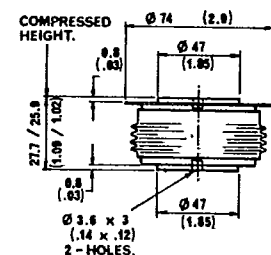


Figure 5 Max. non repetitive surge current at initial junction temperature 160°C



DO - 200 AC

Dimensions in mm (inches)

Mounting force: 1900 - 2600 Kg

Weight: 510 grams

WESTCODE SEMICONDUCTORS

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