



Technical  
Publication  
**DC635**  
Issue 1  
February 1981

**Ceramic Capsule Silicon Diodes Type CXC635**  
1420 amperes average: up to 3000 volts  $V_{RRM}$

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

RATING	CONDITIONS	SYMBOL	
Average forward current	Half sine wave { 55°C heatsink temperature (double side cooled) 100°C heatsink temperature (single side cooled)	$I_{F(AV)}$	1420A
			630A
R.M.S current	25°C heatsink temperature, double side cooled	$I_{F(RMS)}$	2610A
DC forward current	25°C heatsink temperature, double side cooled	$I_F$	2460A
Peak one-cycle surge (non-repetitive) of forward current	8.3ms duration { 60% $V_{RRM}$ re-applied $V_R \leq 10$ volts	$I_{FSM(1)}$ $I_{FSM(2)}$	13460A
			15470A
Maximum permissible surge energy	8.3ms duration { 60% $V_{RRM}$ re-applied $V_R \leq 10$ volts	$I^2t(1)$ $I^2t(2)$	776000A <sup>2</sup> s
			1037900A <sup>2</sup> s
Operating temperature range	3ms duration $V_R \leq 10$ volts	$T_{hs}$ $T_{stg}$	790000A <sup>2</sup> s
			-30 +160°C
Storage temperature			-40 +185°C

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

CHARACTERISTIC	CONDITIONS	SYMBOL	
Peak forward voltage drop	At 3090A, $I_{FM}$	$V_{FM}$	1.87V
Forward conduction threshold voltage		$V_O$	0.87V
Forward conduction slope resistance		$r$	0.323mΩ
Peak reverse current	At $V_{RRM}$	$I_{RRM}$	30mA
Thermal resistance, junction to heat sink for a device with a maximum forward volt-drop characteristic	Capsule Single side cooled Double side cooled	$R_{th(j-hs)}$	0.065°C/W
			0.033°C/W

VOLTAGE CODE	24	26	28	30					
Repetitive voltage $V_{RRM}$	2400	2600	2800	3000					
Non-repetitive voltage $V_{RSM}$	2500	2700	2900	3100					

**ORDERING INFORMATION**

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

<b>S</b>	<b>W</b>	●	●	<b>C</b>	<b>X</b>	<b>C</b>	<b>6</b>	<b>3</b>	<b>5</b>
Fixed basic code	Voltage Code (see above)			Fixed outline code DQ-200 AB cold weld capsule			Fixed type code		

Typical code: SW28CXC635 = 2800V<sub>RRM</sub> type CXC635 diode

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

DC635

34 DE 9709955 0001482 4

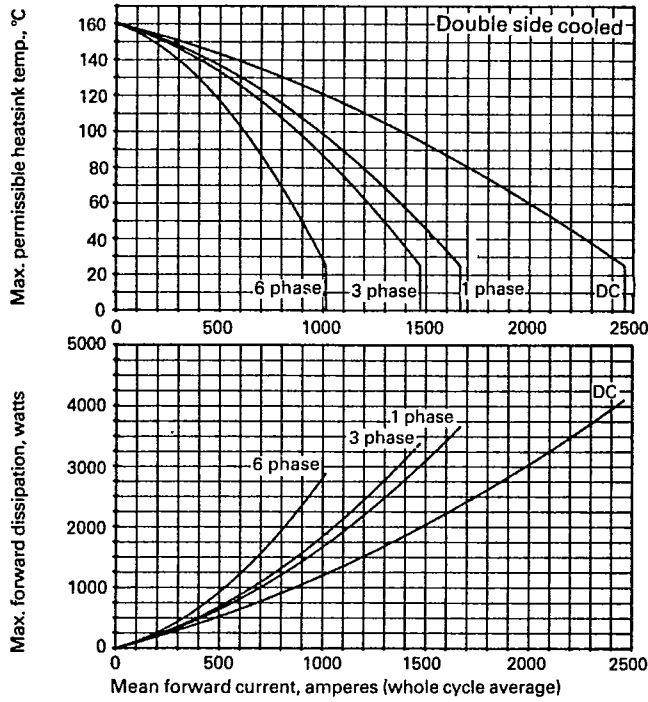


Figure 1 Dissipation/sink temperature v. mean forward current

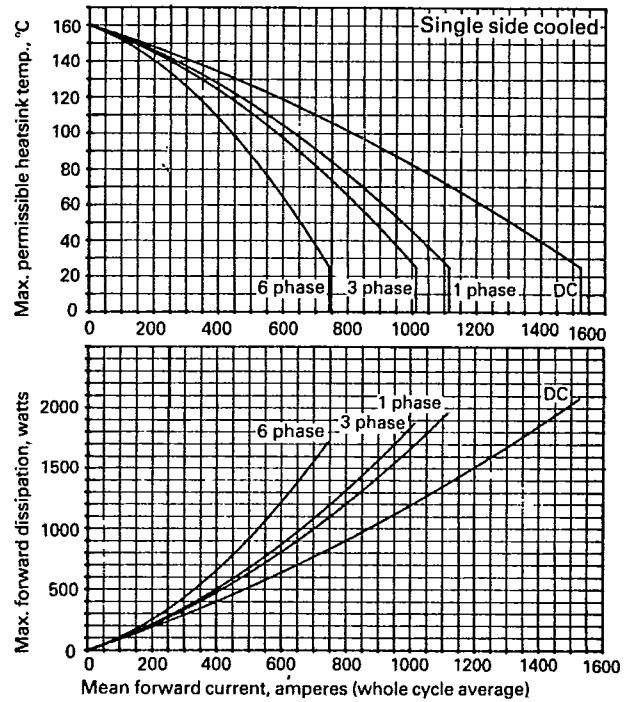


Figure 2 Dissipation/sink temperature v. mean forward current

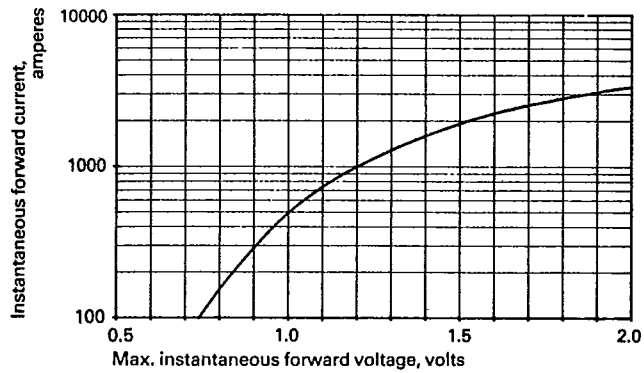


Figure 3 Forward voltage characteristic

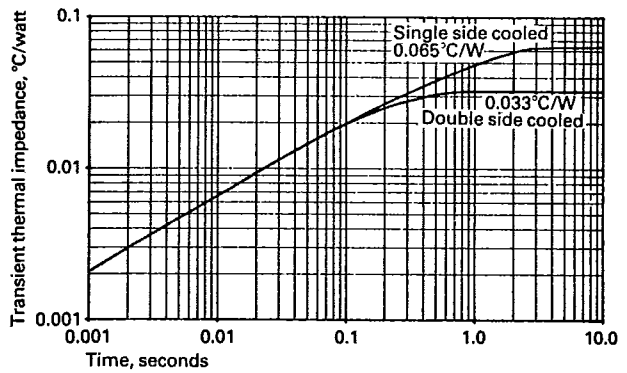


Figure 4 Transient thermal impedance, junction to heatsink

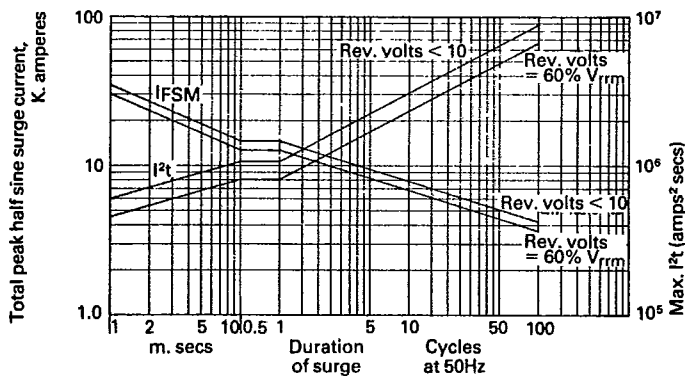
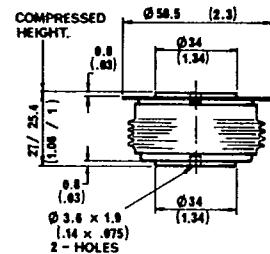


Figure 5 Max. non repetitive surge current at initial junction temperature 160°C



DO - 200 AB

Dimensions in mm (inches)

Mounting force: 1000 - 2000 Kg,

Weight: 340 grams

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