

WESTCODE SEMICONDUCTORS

Series

SWxxCXC470

Capsule Rectifier Diode

Consists of a diffused silicon element mounted in an hermetic ceramic cold welded capsule.

Ratings	Unless otherwise stated $T_j = 190^\circ\text{C}$	Maximum Limits								Units
	Voltage Codes	02	04	06	08	10	12	14	15	
V_{RRM}	Repetitive peak reverse voltage.	200	400	600	800	1000	1200	1400	1500	V
V_{RSM}	Non-repetitive peak reverse voltage.	300	500	700	900	1100	1300	1500	1600	V

$I_{F(AV)}$	Average forward current	Half sine wave		55°C heatsink temperature (double side cooled)		925		A	
$I_{F(RMS)}$	R.M.S forward current			100°C heatsink temperature (single side cooled)		470		A	
I_F	Continuous forward current	25°C heatsink temperature, double side cooled				1630		A	
$I_{FSM(1)}$	Peak one-cycle surge	25°C heatsink temperature, double side cooled				1480		A	
$I_{FSM(2)}$	Peak one-cycle surge	10ms duration, 60% V_{RRM} re-applied				9.0		KA	
$I^2 t_{(2)}$	Maximum permissible surge energy	10ms duration, $V_R \leq 10$ volts				10.0		KA	
T_j	Operating temperature range	10ms duration, $V_R \leq 10$ volts				0.5×10^6		$A^2 s$	
T_{stg}	Storage temperature range	3ms duration, $V_R \leq 10$ volts				0.36×10^6		$A^2 s$	
						-55 to + 190		°C	
						-55 to + 200		°C	

Characteristics Unless otherwise indicated $T_j = 190^\circ\text{C}$				
V_{FM}	Peak forward voltage	$I_F = 1930$ A	1.45	V
V_O	Forward conduction threshold voltage		0.51	V
r	Forward conduction slope resistance		0.49	mΩ
I_{RRM}	Repetitive peak reverse current	At V_{RRM}	15.0	mA
$R_{th(j-hs)}$	Thermal resistance, junction to heat sink.	Double side cooled	0.09	°C/W
		Single side cooled	0.18	°C/W

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

S	W	• •	C	X	C	4	7	0
Fixed type code		Voltage Code (see ratings)		Fixed Outline Code		Fixed Type Code		

Typical code : SW12CXC470, 1200 V_{RRM}

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

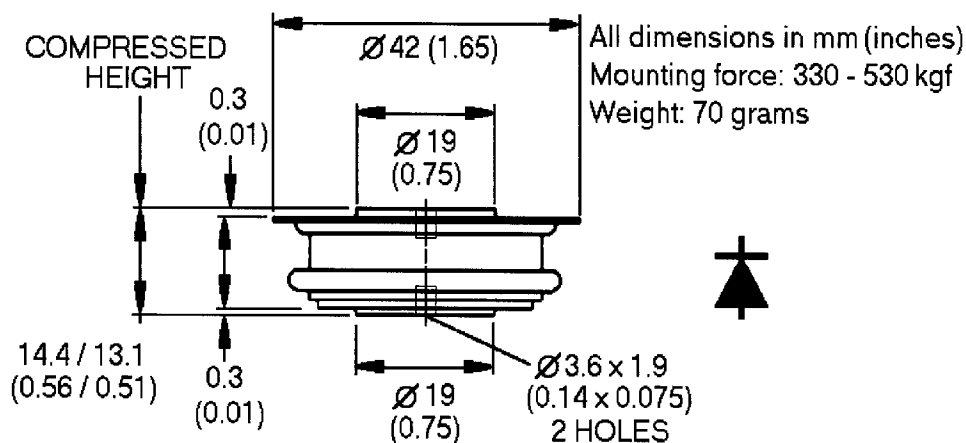


Figure 1. Dissipation/Sink Temperature v. Mean Forward Current.

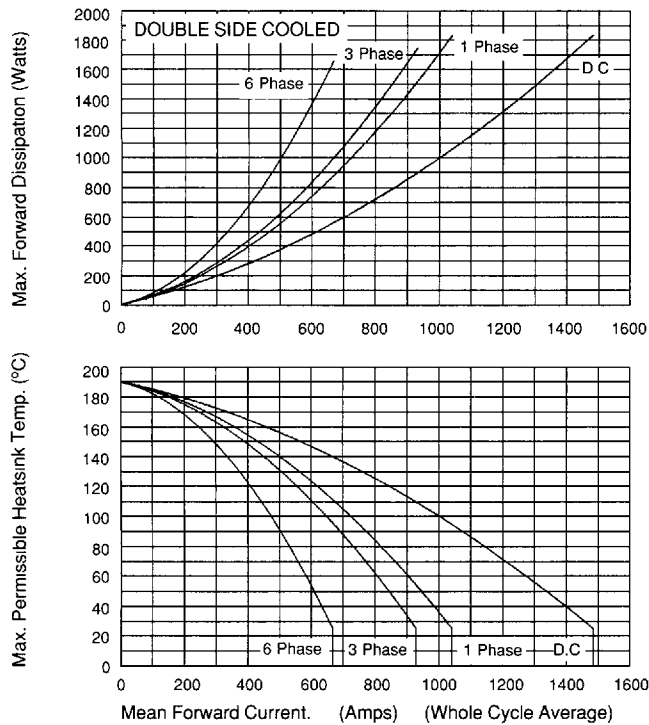


Figure 2. Dissipation/Sink Temperature v. Mean Forward Current.

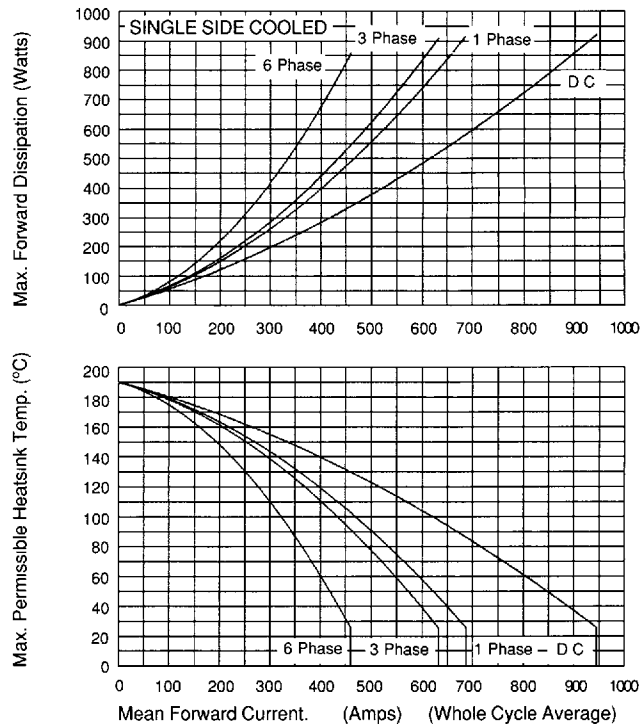


Figure 3. Limit Forward Characteristic at 190°C.

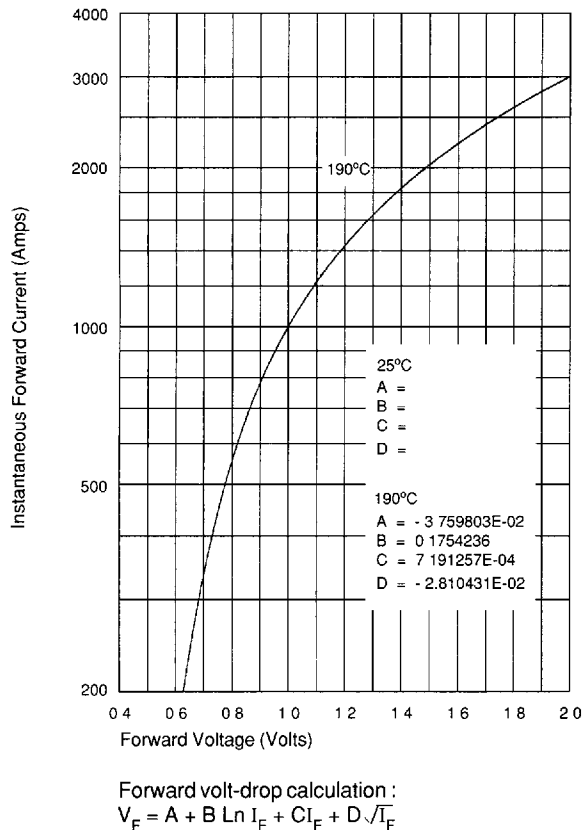


Figure 4. Junction to Sink Transient Thermal Impedance.

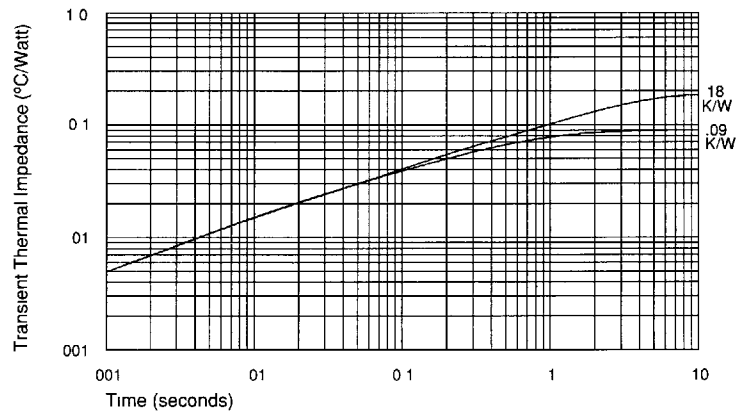
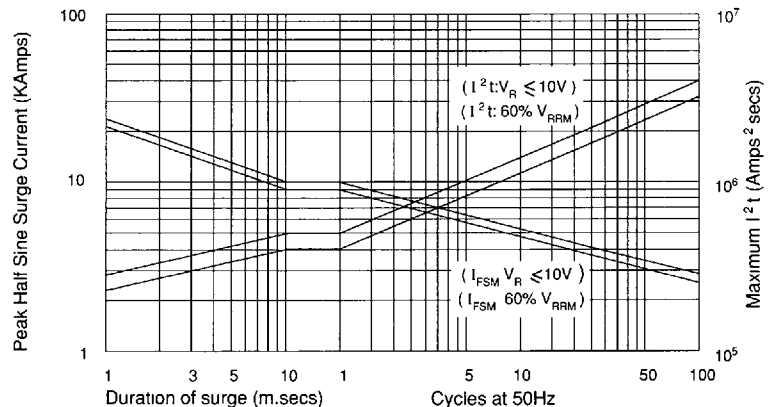


Figure 5. Non-Repetitive Surge Current at Initial Junction Temperature 190°C.



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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