



SDD66

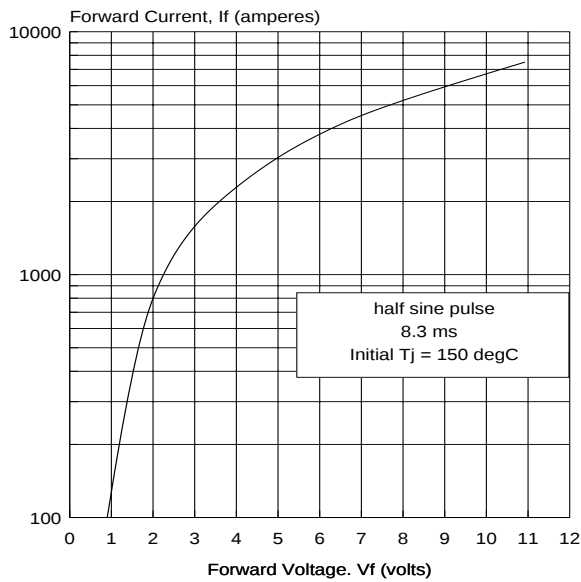
40mm RECTIFIER DIODE

7000V / 520A

The SDD66 rectifier diode features a nominal 40mm silicon junction diameter design , manufactured by the proven multi-diffusion process. High reverse voltage blocking capability is optimized with moderate recovery current and low forward voltage.

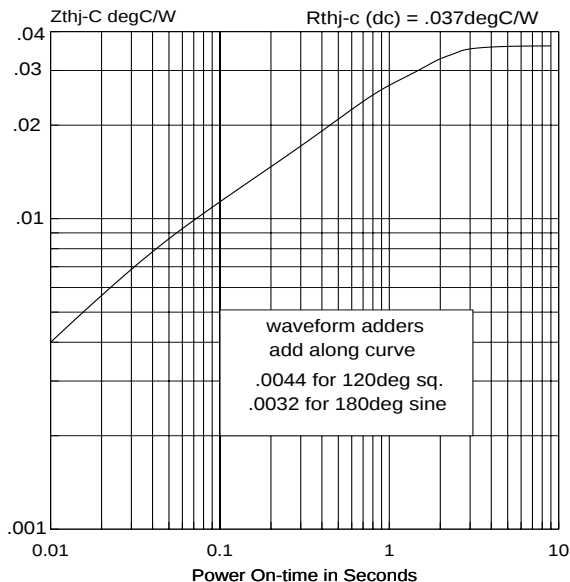
SDD66 is designed specifically for transportation , industrial and utility 50/60 Hz rectifiers having very high current surge and I^2t requirements.

FORWARD CHARACTERISTIC
Process Maximum



96h:166 2/13/97

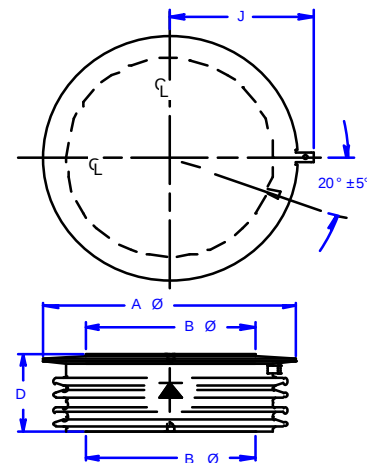
THERMAL IMPEDANCE vs> POWER ON-TIME



SELECTION TABLE

Model No.	Repetitive Peak Reverse Voltage $V_{RRM}@T_J = 0 - 150^{\circ}C$	$V_{RRM}@T_J = -40^{\circ}C$
SDD66MT	7000 V	6500 V
SDD66MR	6800	6300
SDD66MM	6600	6100
SDD66MH	6400	6000
SDD66MD	6200	5800
SDD66KT	6000	5600

MECHANICAL OUTLINE



AΦ = 2.30 in (58.0 mm)
BΦ = 1.35 in (34.3 mm)
D = 1.04 in (26.4 mm)

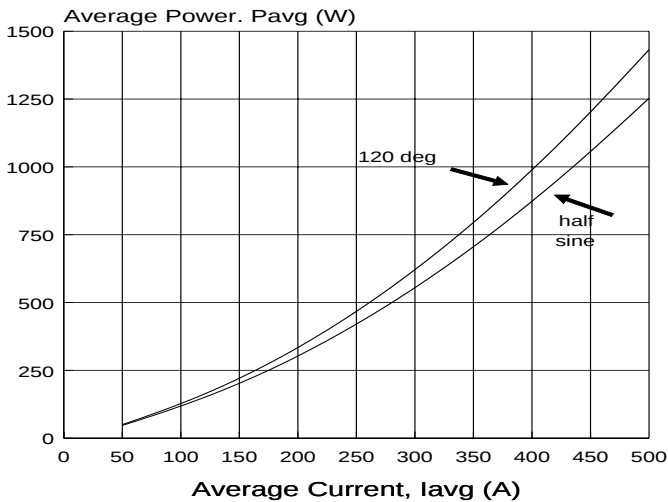
CLAMPING FORCE REQUIRED
3500 -4200 lbs.15.6 - 18.7kN

SILICON POWER CORPORATION
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LIMITING CHARACTERISTICS AND RATINGS

PARAMETER UNITS	SYMBOL	TEST CONDITIONS	MAX. VALUES	
Average current	I_{AV}	half sine $T_c = 10^\circ\text{C}$	520	A
Repetitive peak reverse voltage	V_{RRM}	$T_j = -40$ to $+150^\circ\text{C}$ 50/60 Hz	see page 1	V
Repetitive peak reverse current	I_{RRM}	$T_j = 150^\circ\text{C}$ 25°C	65 10	ma
Forward voltage	V_{FM}	$I_F = 1\text{kA}$, 150°C	2.20	V
Peak recovery current	I_{RM}	$T_j = 150^\circ\text{C}$ @ 10A/us	250	A
Non-rep peak surge current	I_{FSM}	$T_j = 160^\circ$ $t_p = 8.3\text{ms}$ $t_p = 10\text{ms}$ $V_R = 0$	7500 7100	A

POWER DISSIPATION Full Cycle Average 50/60 Hz

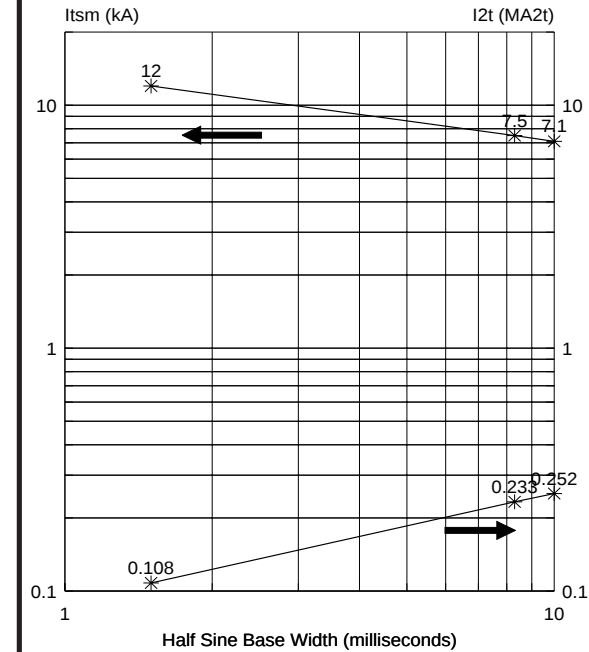


AVERAGE POWER DISSIPATION

$T_j = 150 \text{ degC}$

I_{AV} (A)	half sine	120° sq.
50	47	50
100	115	123
150	199	217
200	300	331
250	418	464
300	552	618
350	703	792
400	870	985
450	1053	1198
500	1253	1432

NON-REPETITIVE SURGE CURRENT AND I_{2t} CAPABILITY FOR FUSE COORDINATION



MAXIMUM PEAK RECOVERY CURRENT

