

SHINDENGEN

Super Fast Recovery Rectifiers

Modules

D120LC40

400V 120A

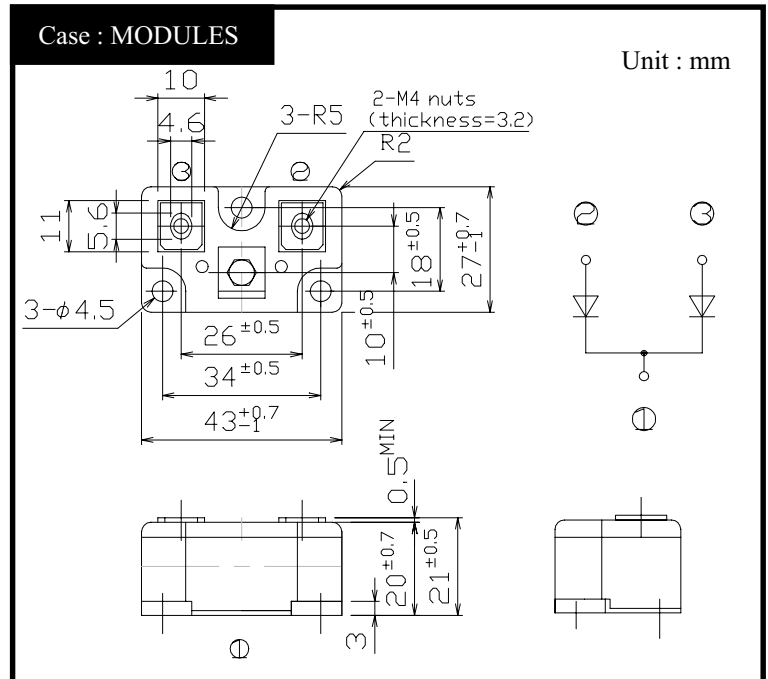
FEATURES

- High current capacity
- trr100ns
- Small θ_{jc}

APPLICATION

- Semiconductor Production Equipment
- Big Power Supply
- Factory Automation, Robot

OUTLINE DIMENSIONS



RATINGS

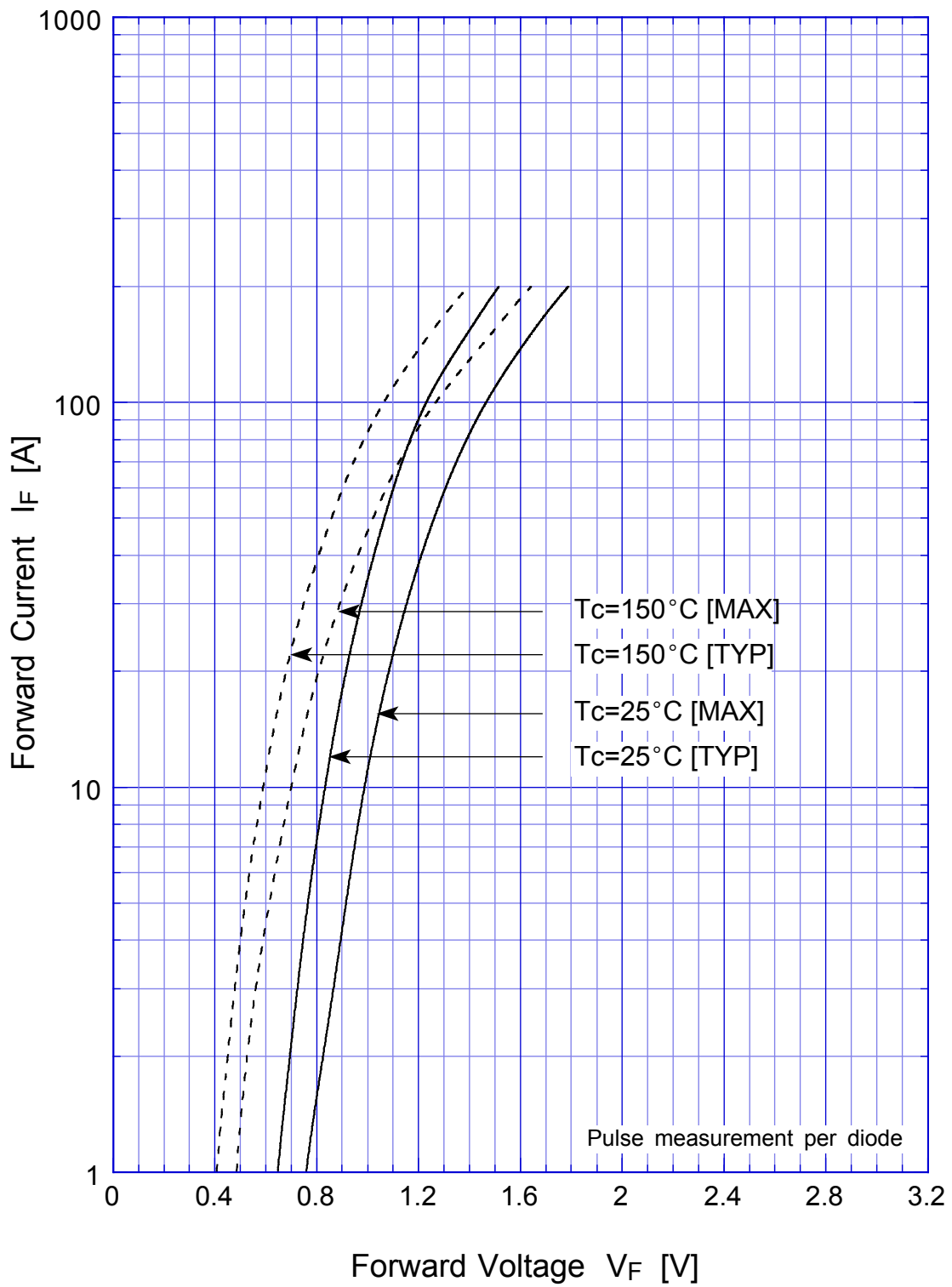
- Absolute Maximum Ratings (If not specified $T_c=25^\circ\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		-40~150	$^\circ\text{C}$
Operating Junction Temperature	T_j		150	$^\circ\text{C}$
Maximum Reverse Voltage	V_{RM}		400	V
Average Rectified Forward Current	I_O	50Hz sine wave, R-load, Rating for each arm $I_o/2$, $T_c=95^\circ\text{C}$	120	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1cycle peak value, Rating of per arm $T_j=25^\circ\text{C}$	650	A
Mounting Torque	TOR		1.7	N·m

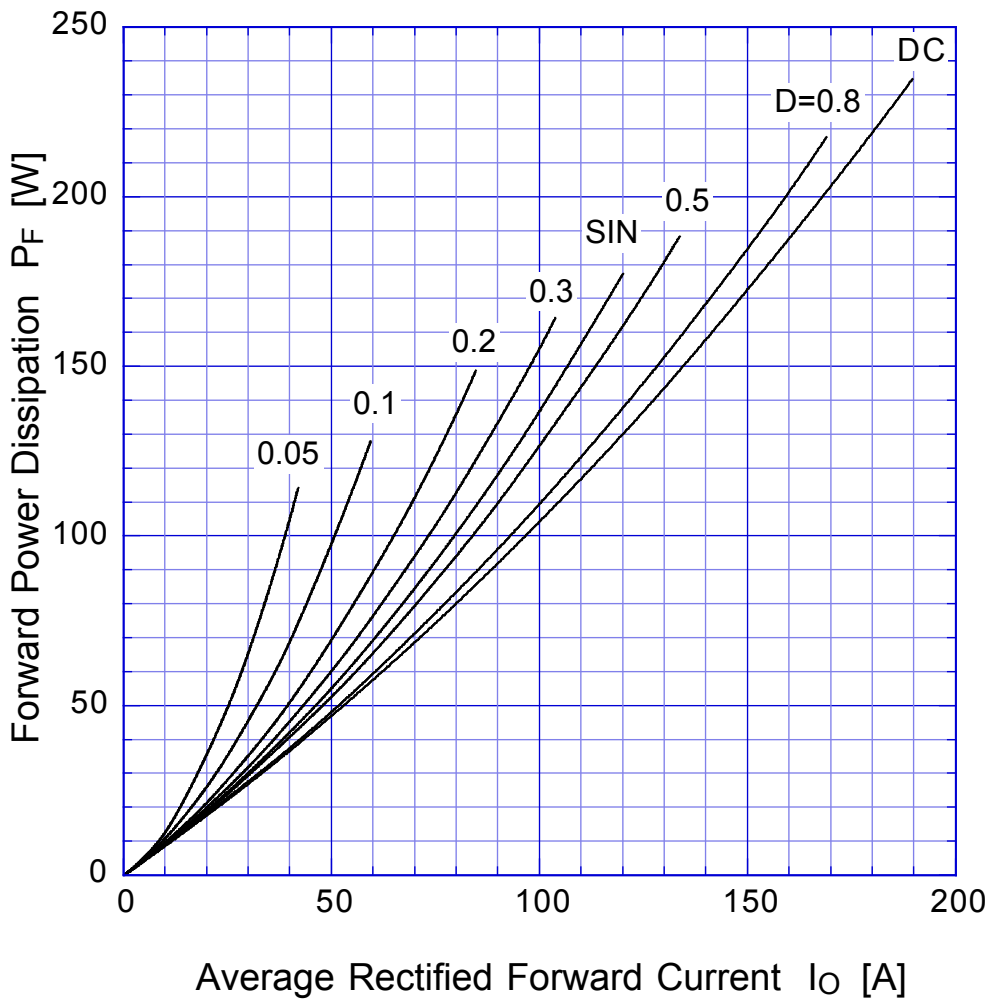
- Electrical Characteristics (If not specified $T_c=25^\circ\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	$I_F=60\text{A}$, Pulse measurement, Rating of per arm	Max.1.3	V
Reverse Current	I_R	$V_R=V_{RM}$, Pulse measurement, Rating of per arm	Max.25	μA
Reverse Recovery Time	trr	$I_F=0.5\text{A}$, $I_R=1\text{A}$, Rating of per arm	Max.100	ns
Thermal Resistance	θ_{jc}	junction to case	Max.0.31	$^\circ\text{C}/\text{W}$

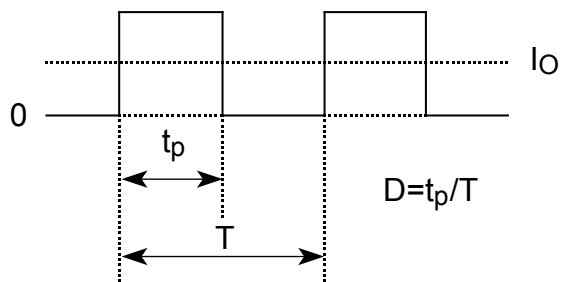
D120LC40 Forward Voltage



D120LC40 Forward Power Dissipation

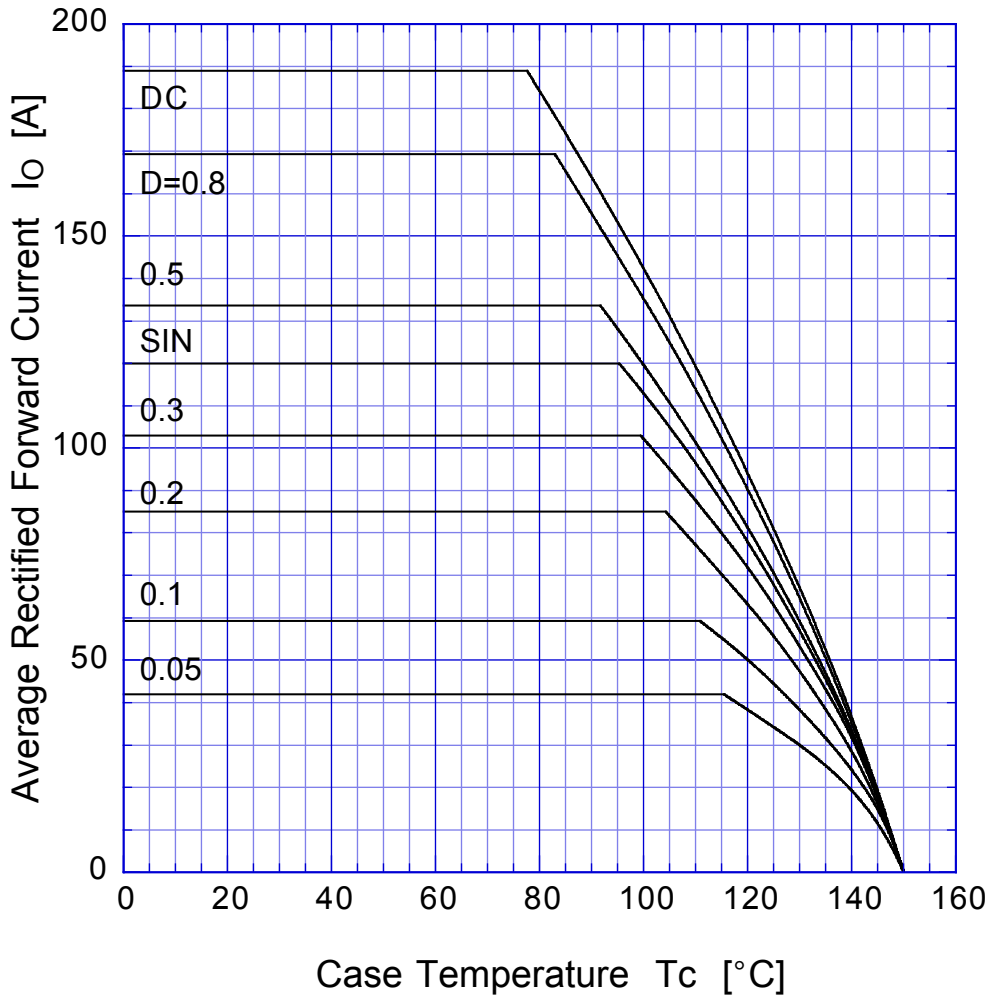


$T_j = T_{jmax}$

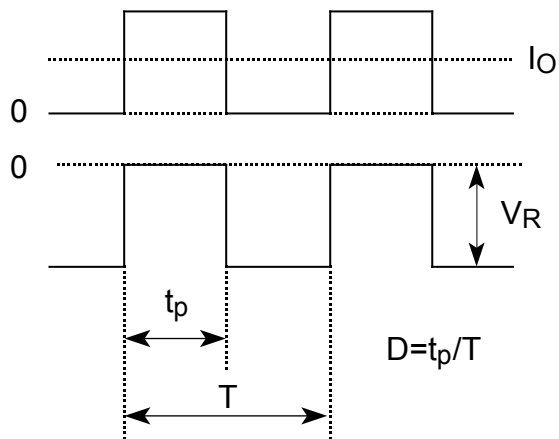


D120LC40

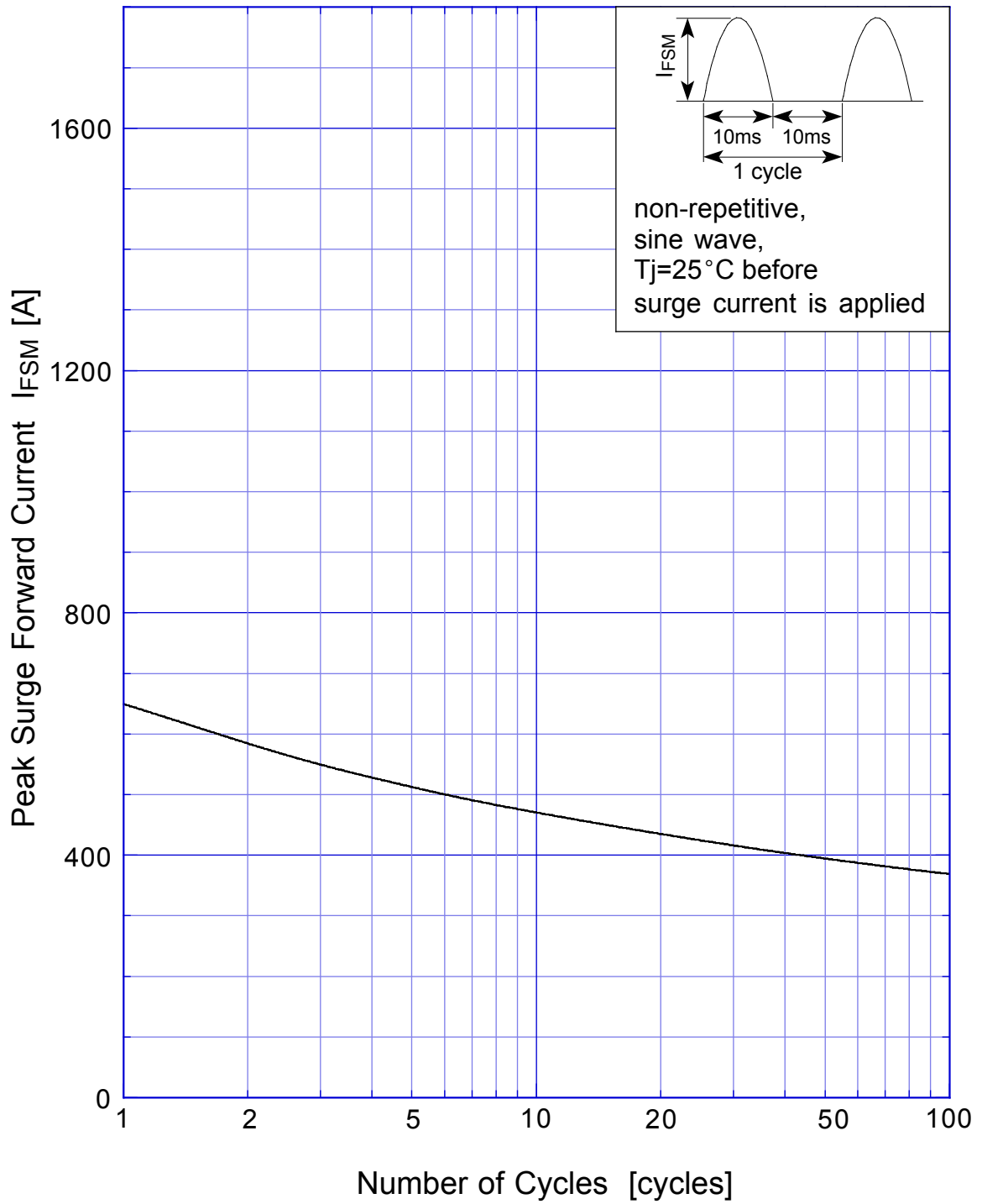
Derating Curve



$$V_R = V_{RM}$$



D120LC40 Peak Surge Forward Capability



D120LC40 Junction Capacitance

