

# SHINDENGEN

## Super Fast Recovery Rectifiers

Modules

# D120LC40

## 400V 120A

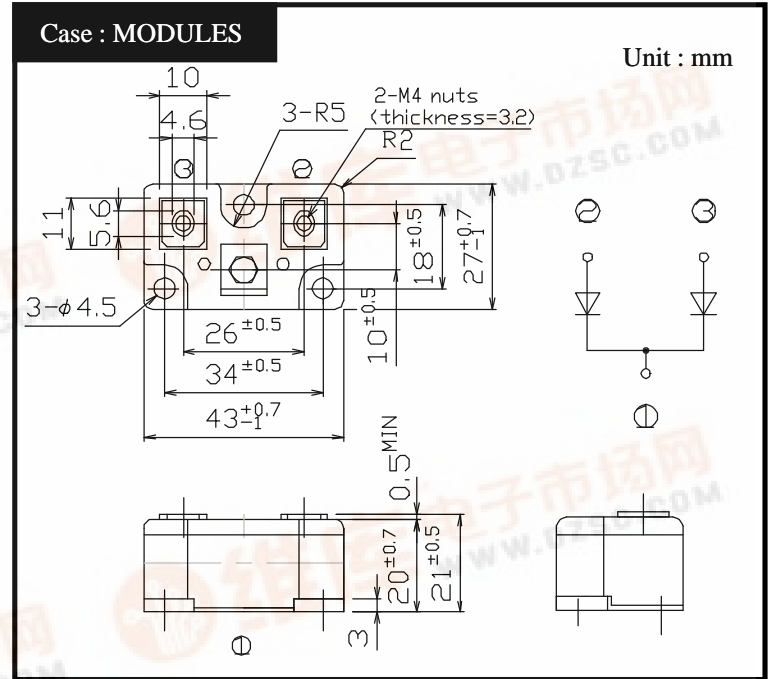
### FEATURES

- High current capacity
- trr100ns
- Small jc

### APPLICATION

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

### OUTLINE DIMENSIONS



### RATINGS

Absolute Maximum Ratings (If not specified Tc=25 )

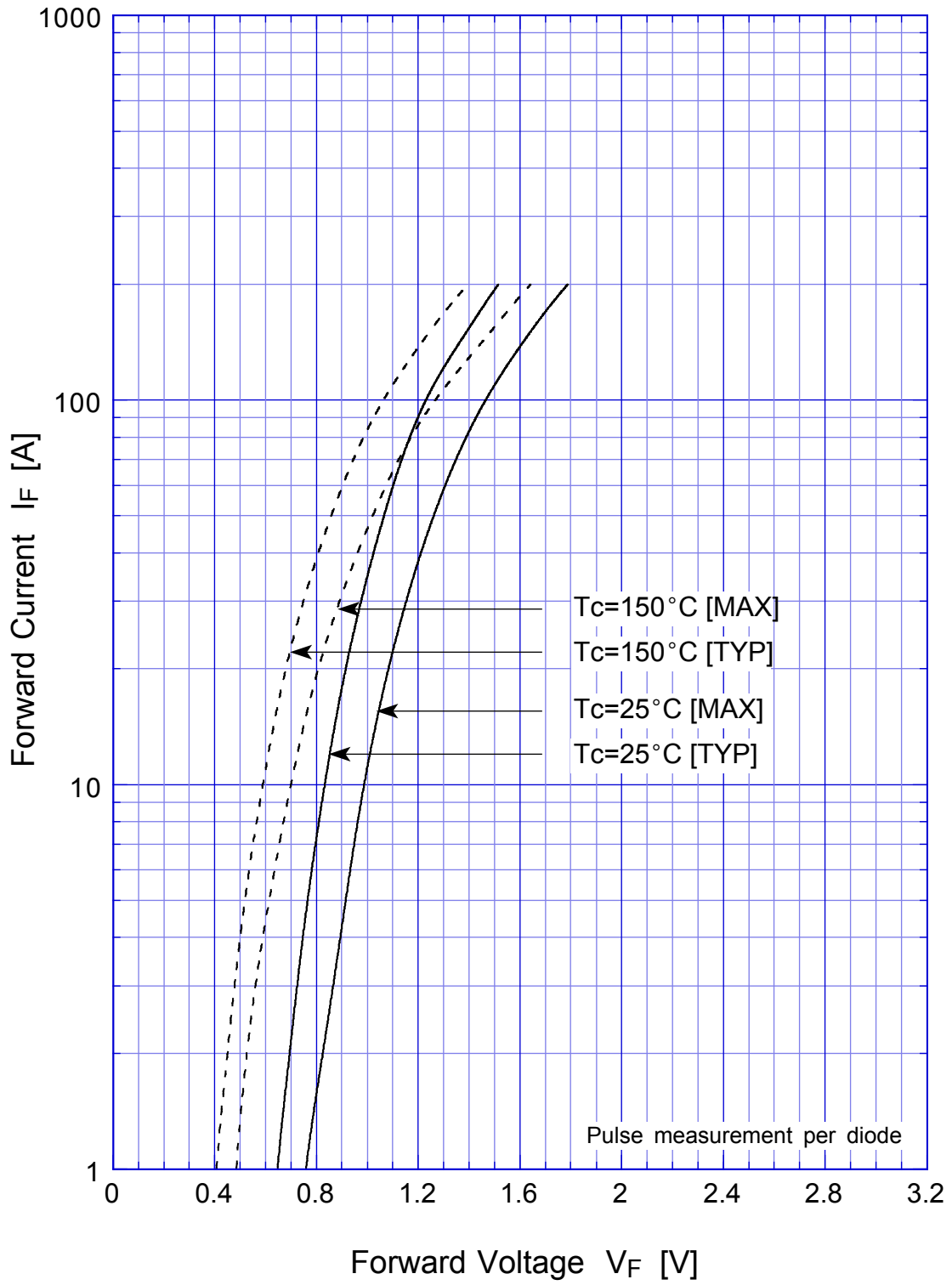
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-40 ~ 150	
Operating Junction Temperature	Tj		150	
Maximum Reverse Voltage	V <sub>RM</sub>		400	V
Average Rectified Forward Current	I <sub>O</sub>	50Hz sine wave, R-load, Rating for each arm I <sub>o</sub> /2, Tc=95	120	A
Peak Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1cycle peak value, Rating of per arm Tj=25	650	A
Mounting Torque	TOR		1.7	N·m

Electrical Characteristics (If not specified Tc=25 )

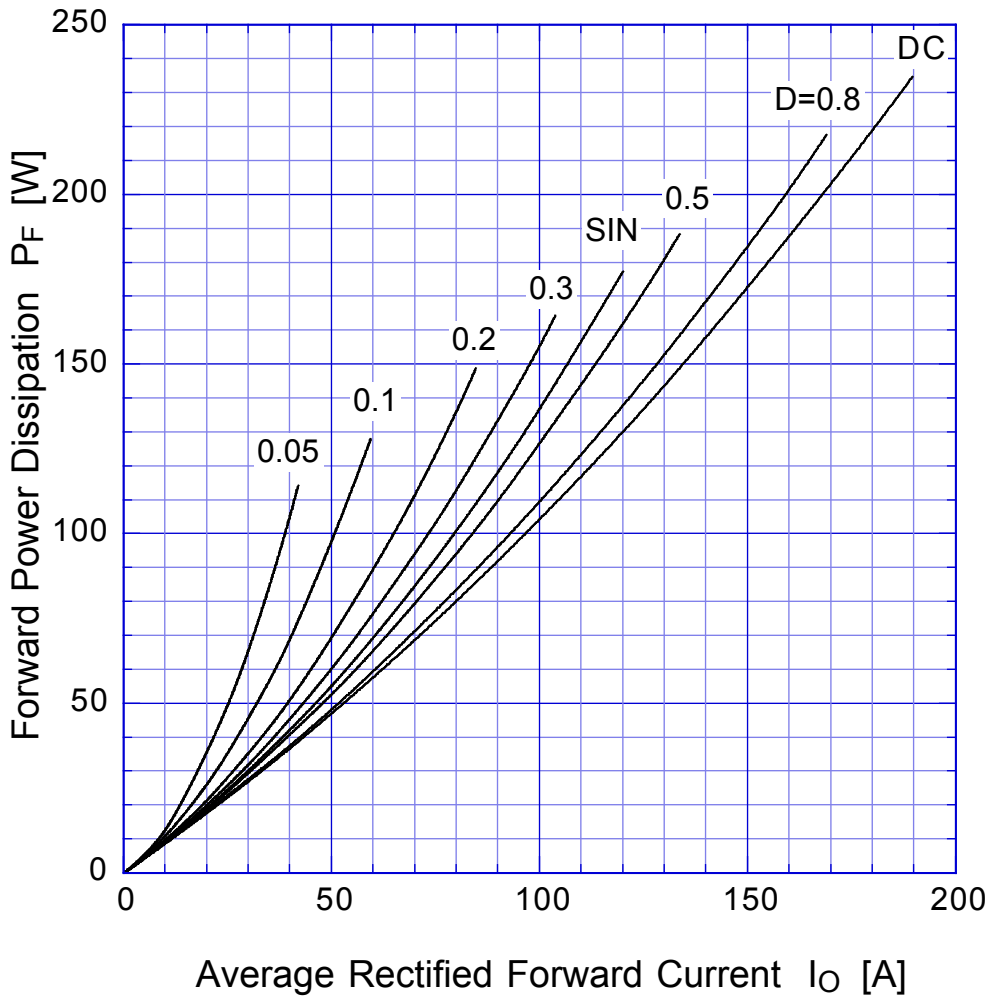
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =60A, Pulse measurement, Rating of per arm	Max.1.3	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement, Rating of per arm	Max.25	μA
Reverse Recovery Time	trr	I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, Rating of per arm	Max.100	ns
Thermal Resistance	jc	junction to case	Max.0.31	/W



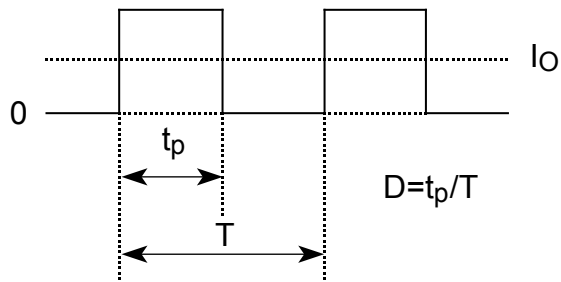
# D120LC40 Forward Voltage



# D120LC40 Forward Power Dissipation

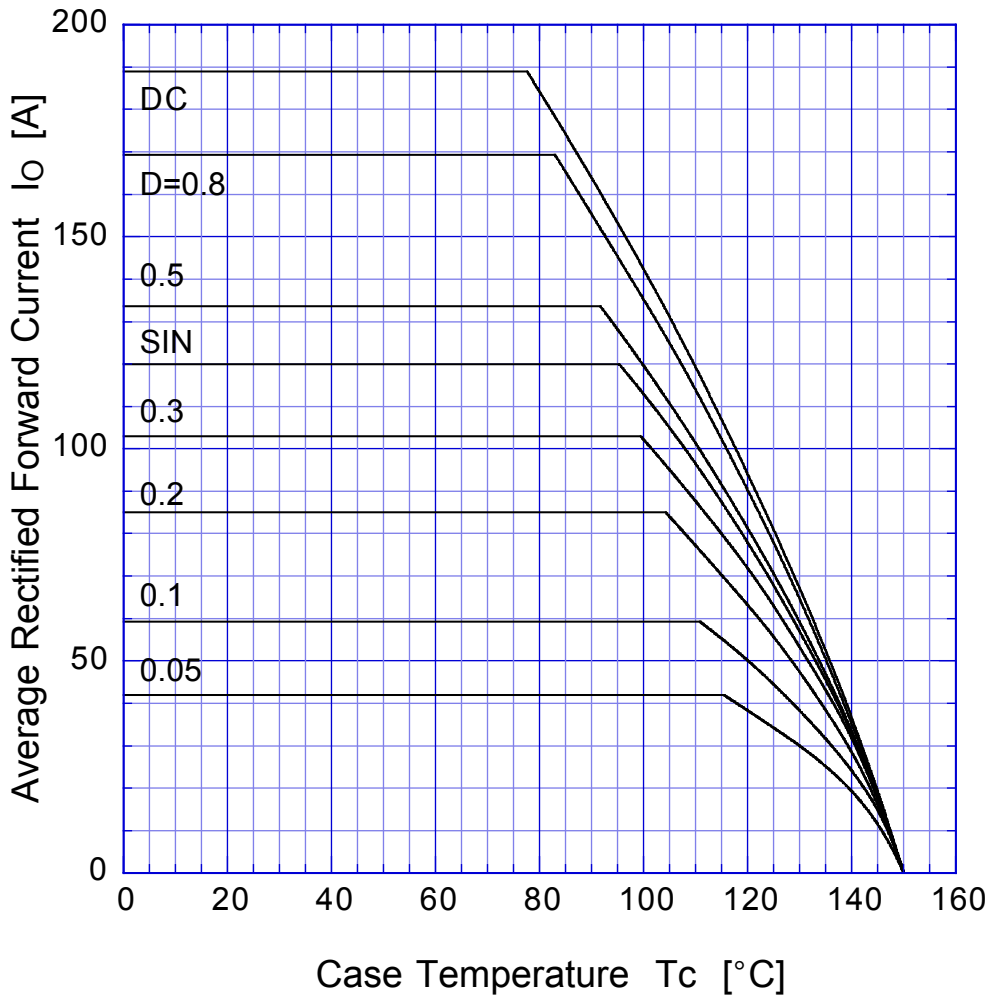


$T_j = T_{jmax}$

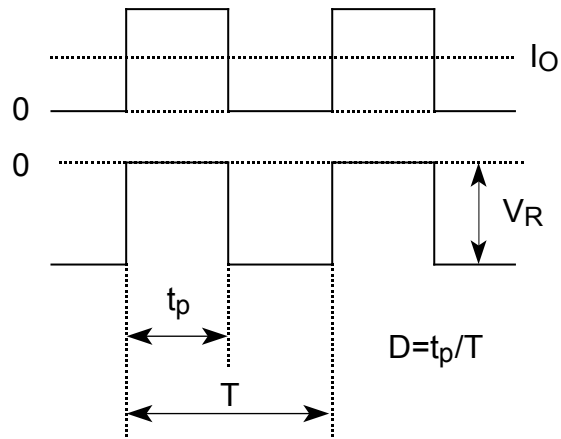


# D120LC40

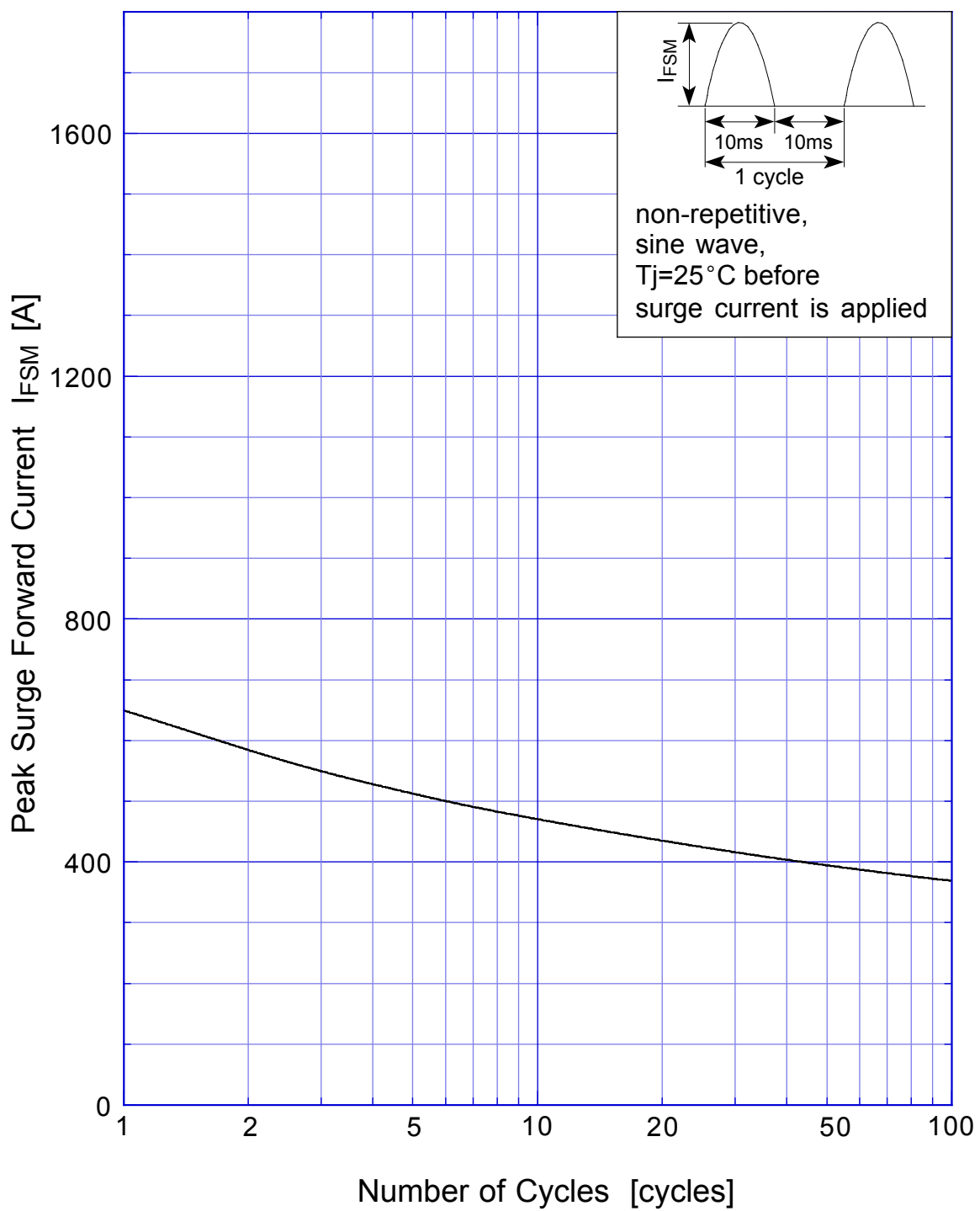
## Derating Curve



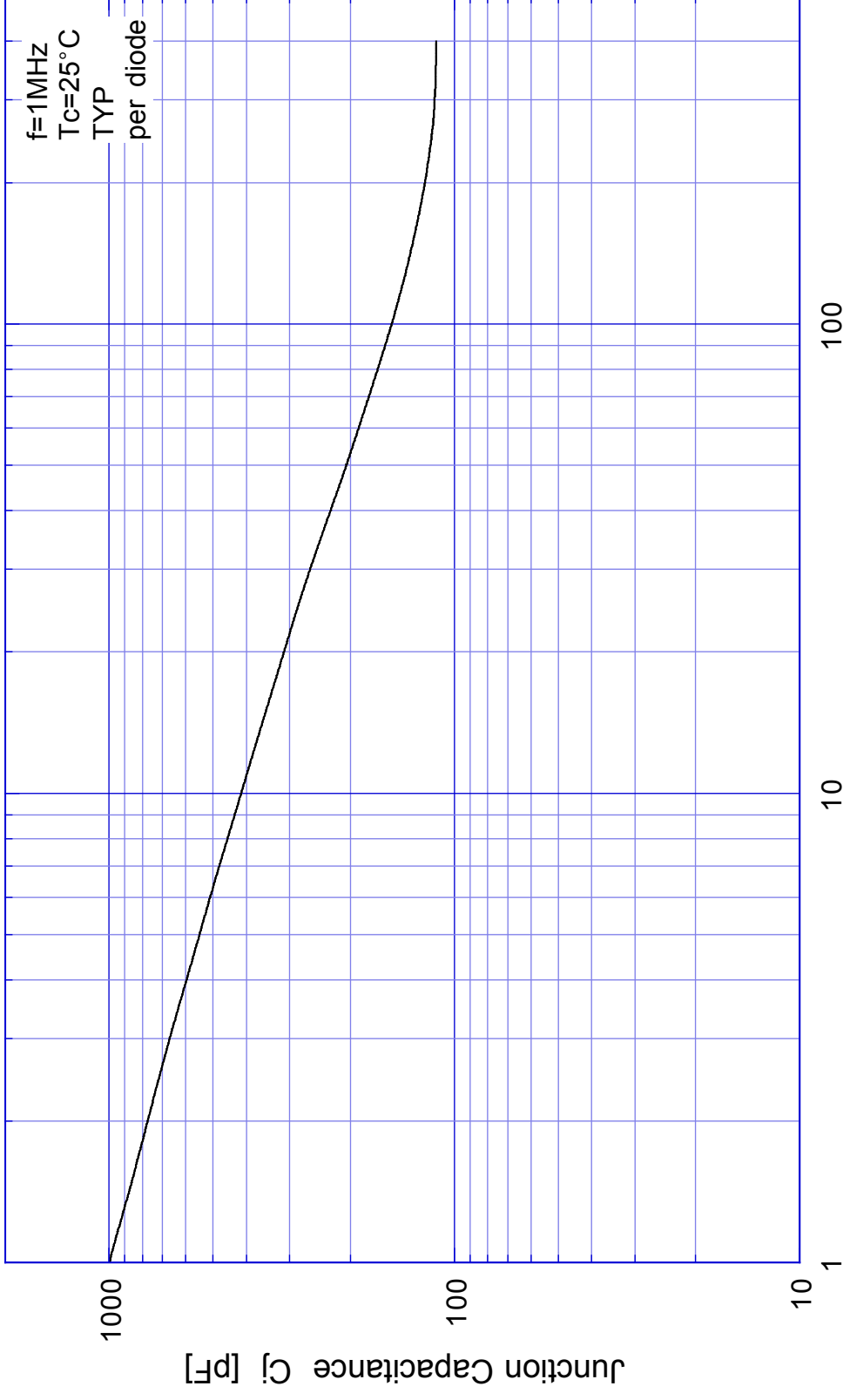
$$V_R = V_{RM}$$



# D120LC40 Peak Surge Forward Capability



# D120LC40 Junction Capacitance



Reverse Voltage  $V_R$  [V]