

SHINDENGEN

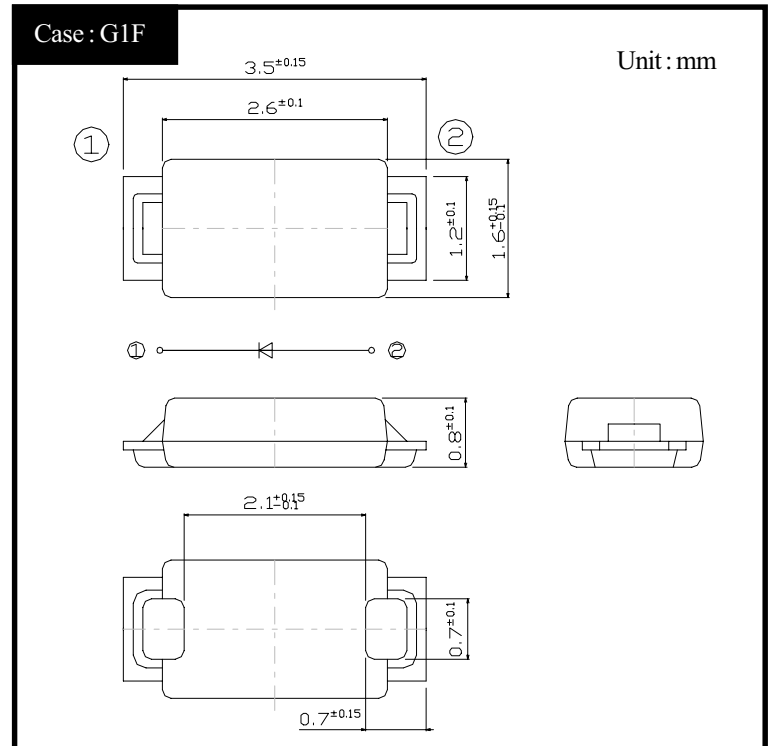
Schottky Rectifiers (SBD)

Single

DG1M3A

30V 1.5A

OUTLINE DIMENSIONS



RATINGS

Absolute Maximum Ratings (Tl=25°C unless otherwise specified)

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-55 to 150	°C
Operating Junction Temperature	Tj		150	°C
Maximum Reverse Voltage	V _{RM}		30	V
Average Rectified Forward Current	I _O	50Hz sine wave, R-load, Ta = 32°C, *1	1.0	A
	I _O	50Hz sine wave, R-load, Ta = 37°C, *2	1.5	A
Peak Surge Forward Current	I _{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj = 25°C	30	A

Electrical Characteristics (Tl=25°C unless otherwise specified)

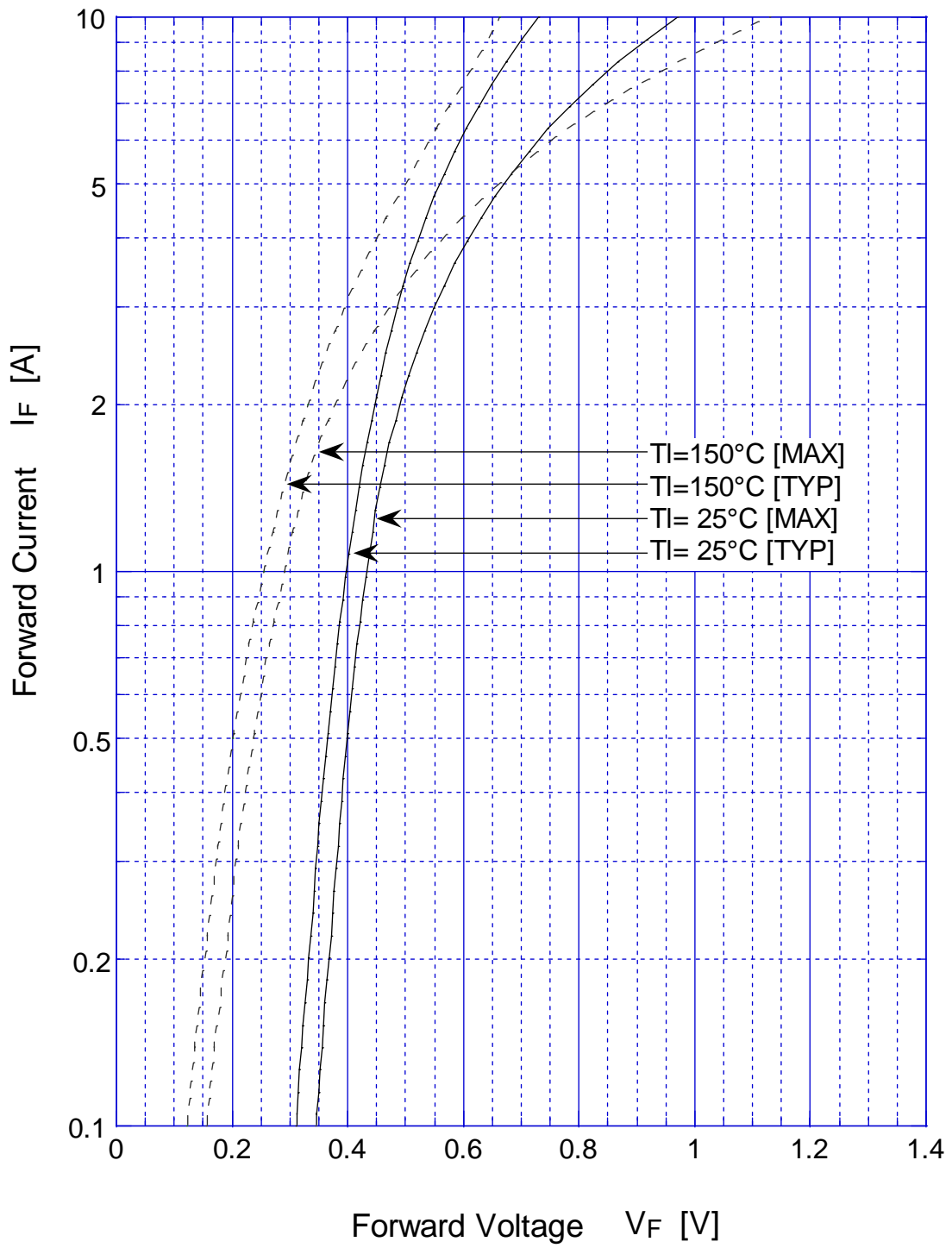
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V _F	I _F = 0.5A, Pulse measurement	Max 0.40	V
	V _F	I _F = 1.5A, Pulse measurement	Max 0.46	V
Reverse Current	I _R	V _R = V _{RM} , Pulse measurement	Max 0.05	mA
Junction Capacitance	C _j	f = 1MHz, V _R = 10V	Typ 70	pF
Thermal Resistance	θ _{ja}	junction to ambient, *1	Max 210	°C/W
	θ _{ja}	junction to ambient, *2	Max 120	
	θ _{ja}	junction to ambient, *3	Max 70	
	θ _{jl}	junction to lead, *3	Max 20	

*1 Measured on the 1×1 inch phenol substrate (pattern area : 32.6mm²)

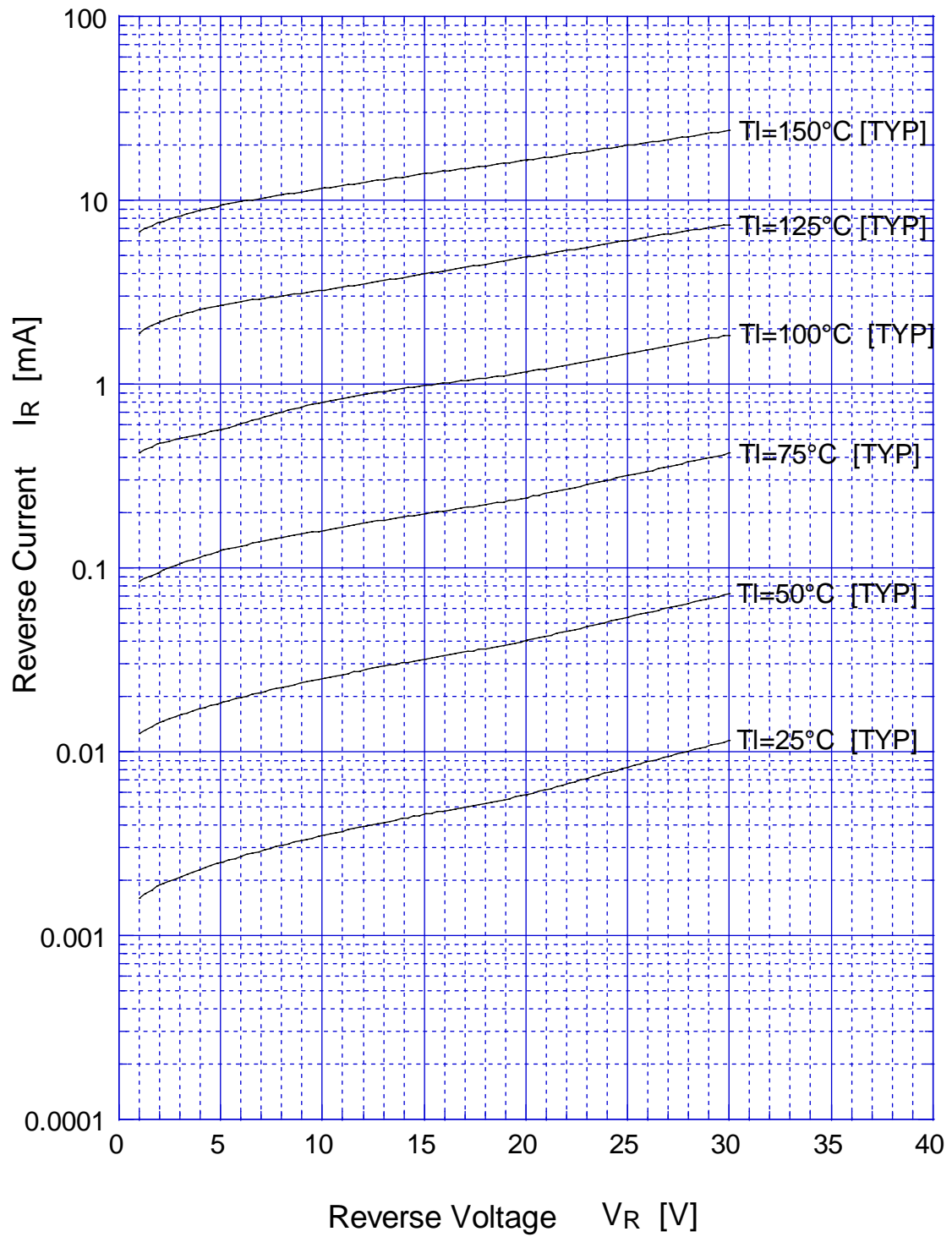
*2 Measured on the 1×1 inch phenol substrate (pattern area : 160mm²)

*3 Measured on the 2×2 inch alumina substrate (pattern area : 2100mm²)

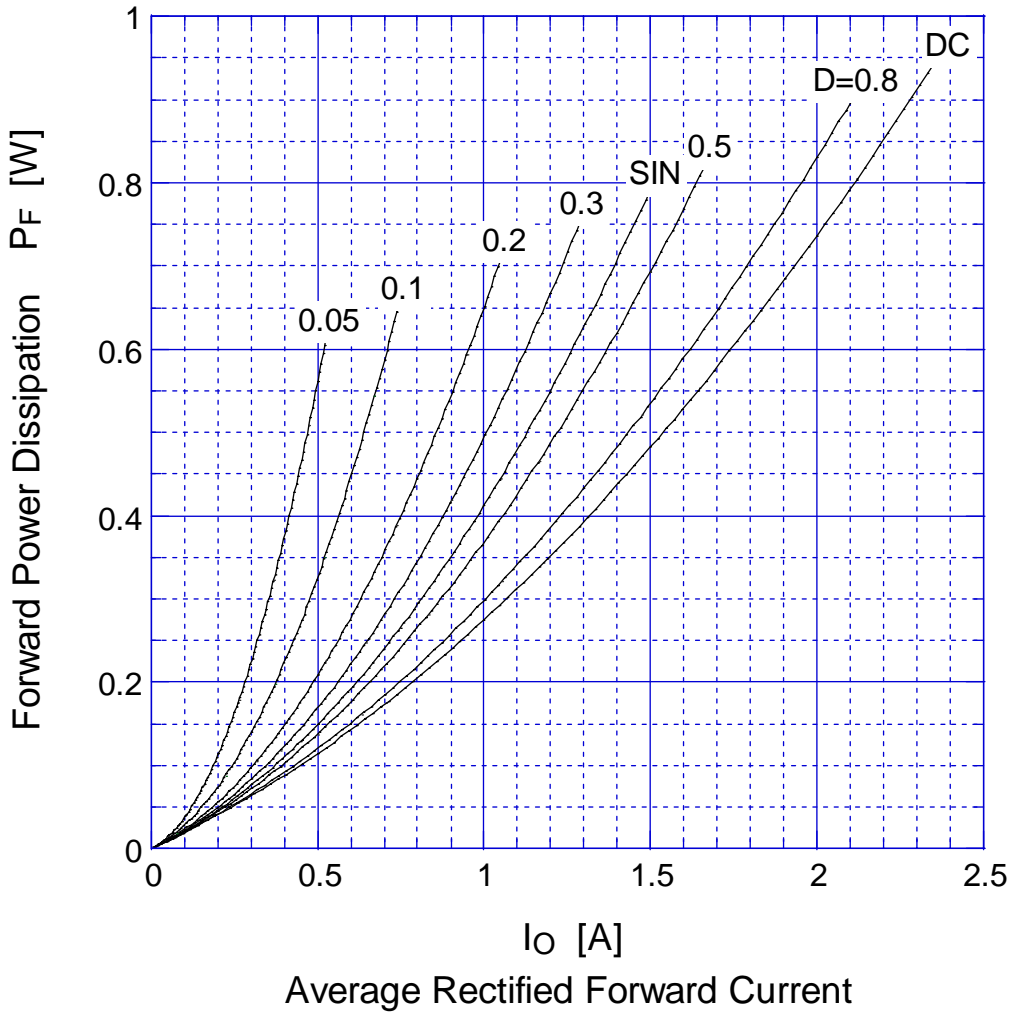
DG1M3A Forward Voltage



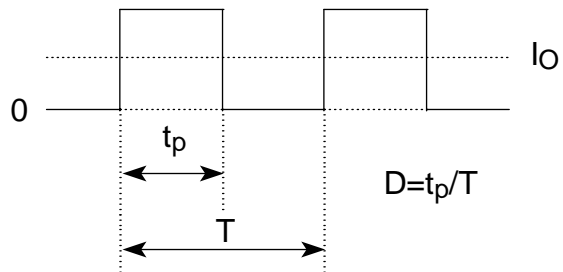
DG1M3A Reverse Current



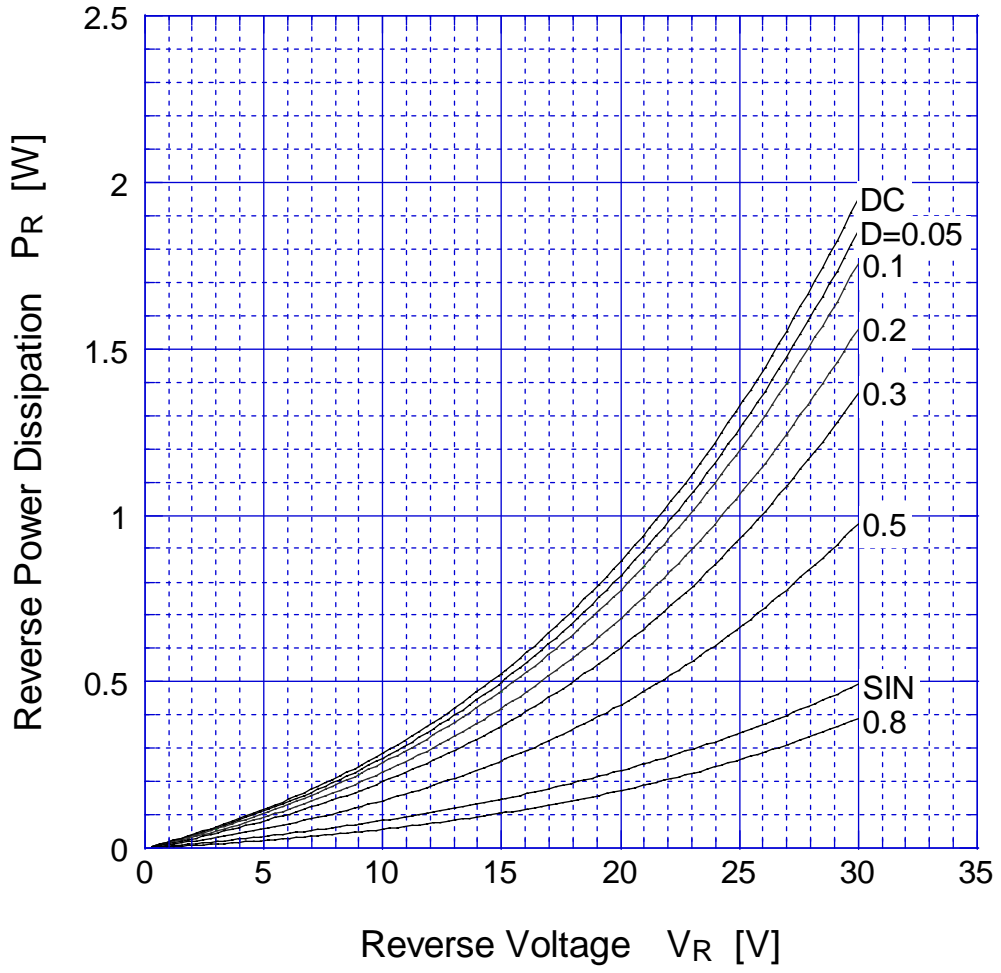
DG1M3A Forward Power Dissipation



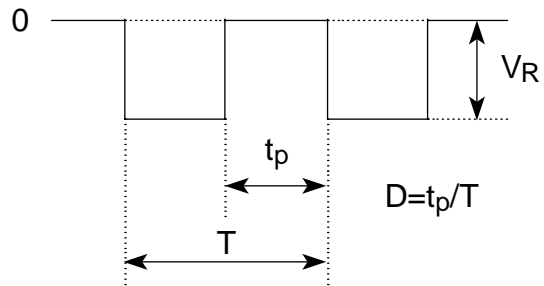
$T_j = 150^\circ\text{C}$



DG1M3A Reverse Power Dissipation



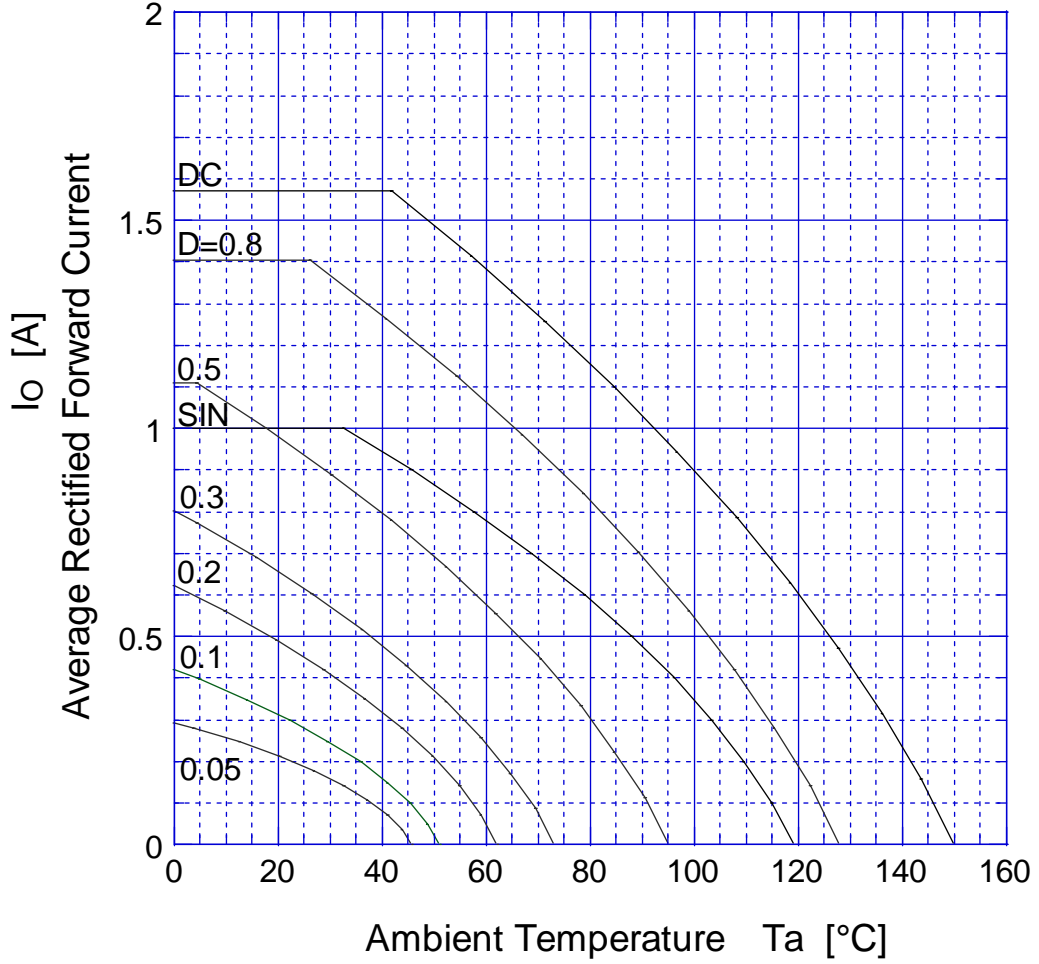
$T_j = 150^\circ\text{C}$



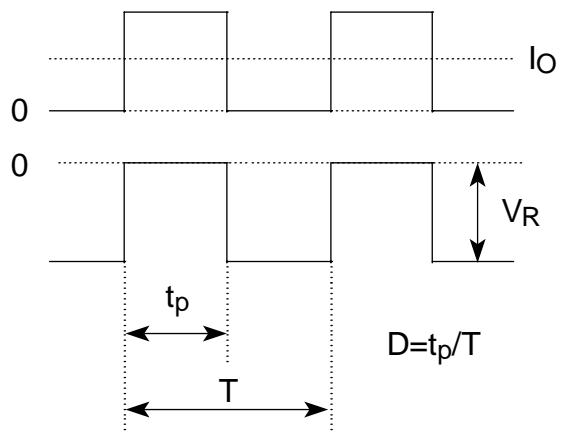
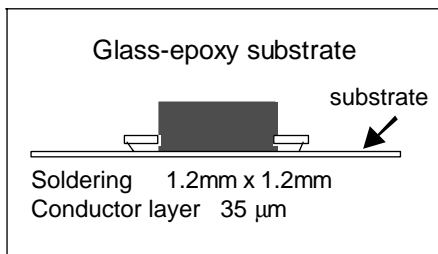
DG1M3A

Derating Curve

* Measured on the 1x1 inch phenol substrate
(pattern area : 80mm²)



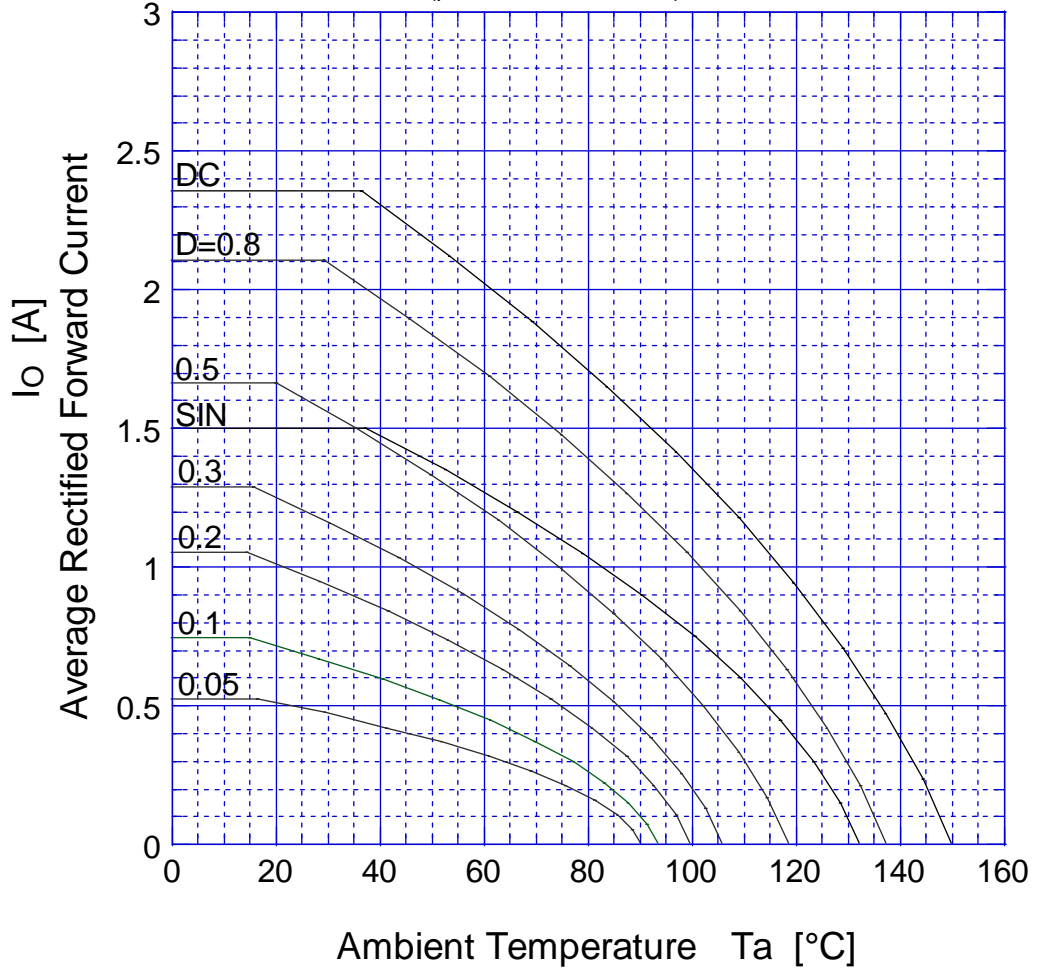
$V_R = 15V$



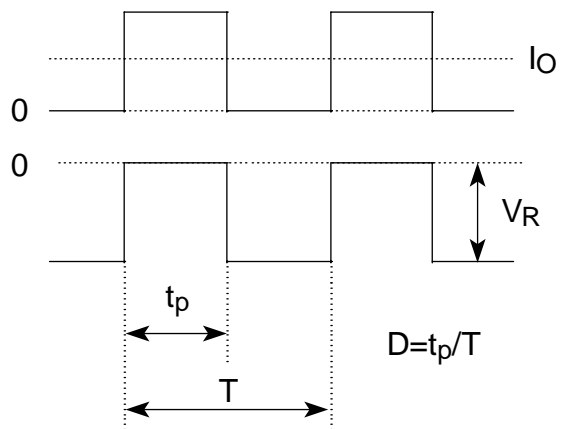
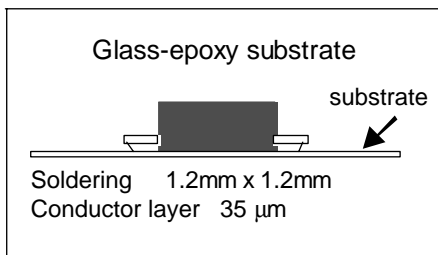
DG1M3A

Derating Curve

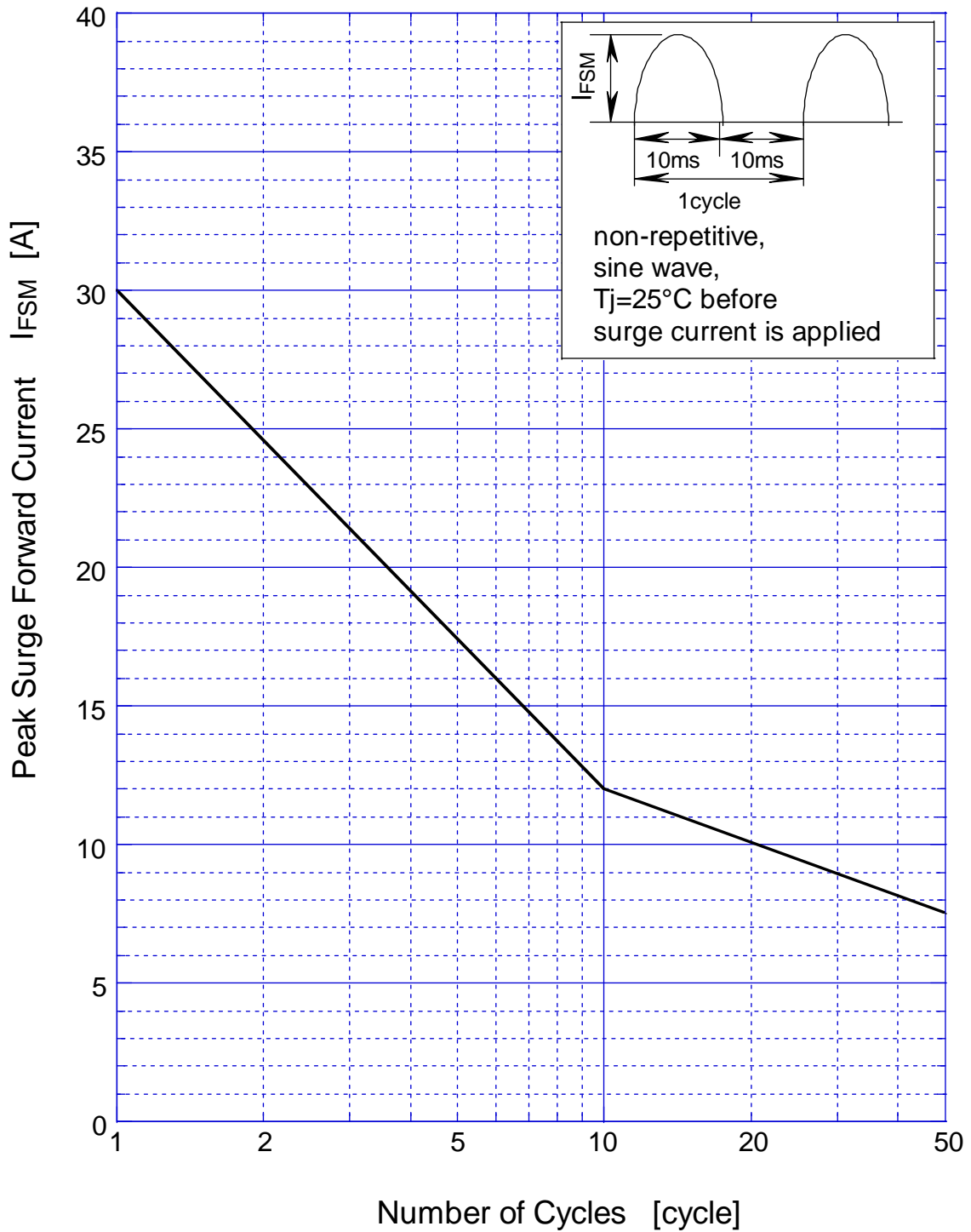
* Measured on the 1x1 inch phenol substrate
(pattern area : 160mm²)



$V_R = 15V$



DG1M3A Peak Surge Forward Capability



DG1M3A Junction Capacitance

