

SHINDENGEN

Schottky Rectifiers (SBD)

Single

D1FS4A

40V 1.5A

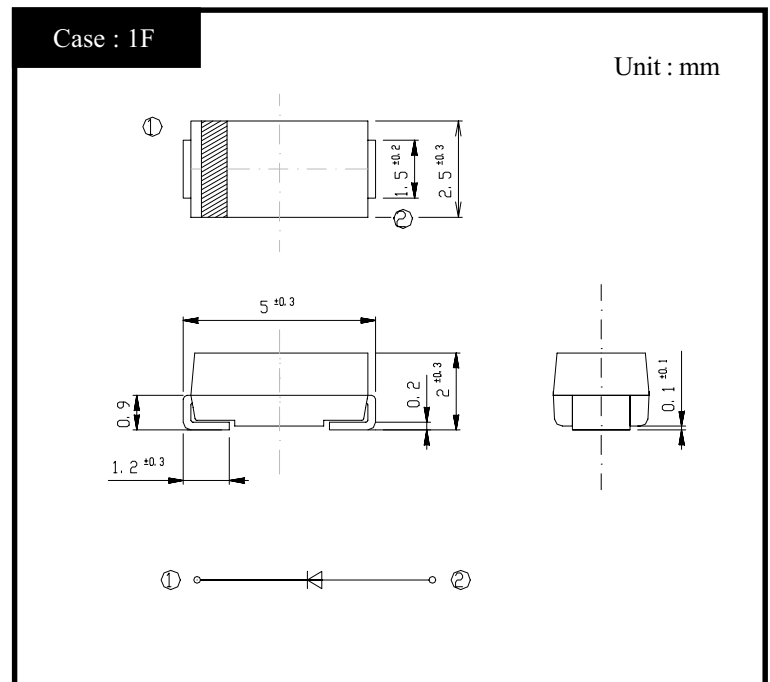
FEATURES

- Small SMT
- $T_j 150^{\circ}\text{C}$
- Low $V_F=0.45\text{V}$
- P_{RRSM} avalanche guaranteed

APPLICATION

- Switching power supply
- DC/DC converter
- Home Appliances, Office Equipment
- Telecommunication

OUTLINE DIMENSIONS



RATINGS

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

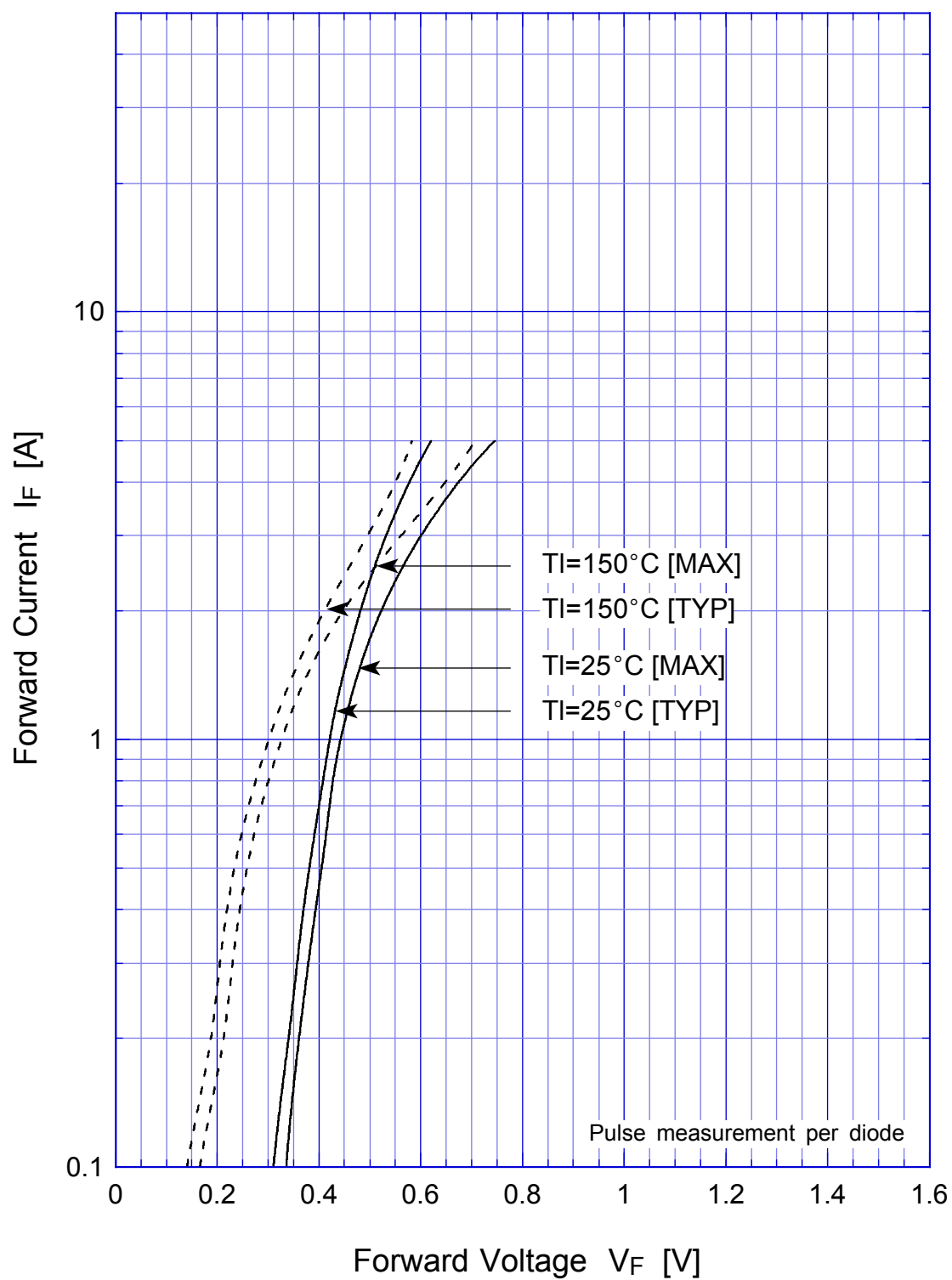
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		-55~150	$^{\circ}\text{C}$
Operating Junction Temperature	T_j		150	$^{\circ}\text{C}$
Maximum Reverse Voltage	V_{RM}		40	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	45	V
Average Rectified Forward Current	I_O	50Hz sine wave, R-load $T_a=28^{\circ}\text{C}$ On alumina substrate	1.5	A
		50Hz sine wave, R-load $T_a=36^{\circ}\text{C}$ On glass-epoxy substrate	1.1	
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25^{\circ}\text{C}$	60	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width $10\mu\text{s}$, Rating of per diode, $T_j=25^{\circ}\text{C}$	160	W

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

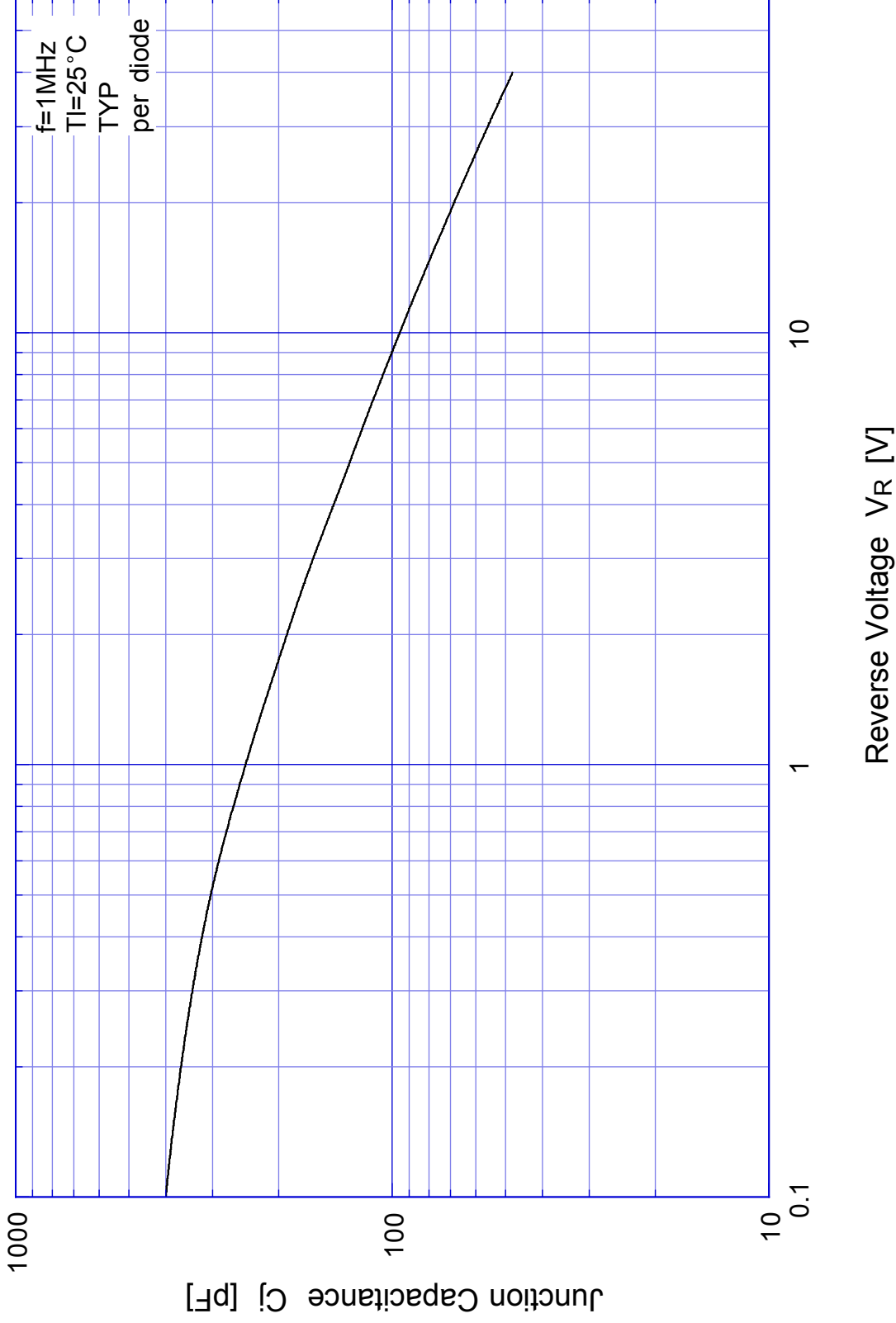
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	$I_F=1.1\text{A}$, Pulse measurement	Max.0.45	V
		$I_F=1.5\text{A}$, Pulse measurement	Max.0.48	
Reverse Current	I_R	$V_R=V_{RM}$, Pulse measurement	Max.2	mA
Junction Capacitance	C_j	$f=1\text{MHz}$, $V_R=10\text{V}$	Typ.95	pF
Thermal Resistance	θ_{jl}	junction to lead	Max.23	$^{\circ}\text{C/W}$
	θ_{ja}	junction to ambient On alumina substrate	Max.108	
		junction to ambient On glass-epoxy substrate	Max.157	

D1FS4A

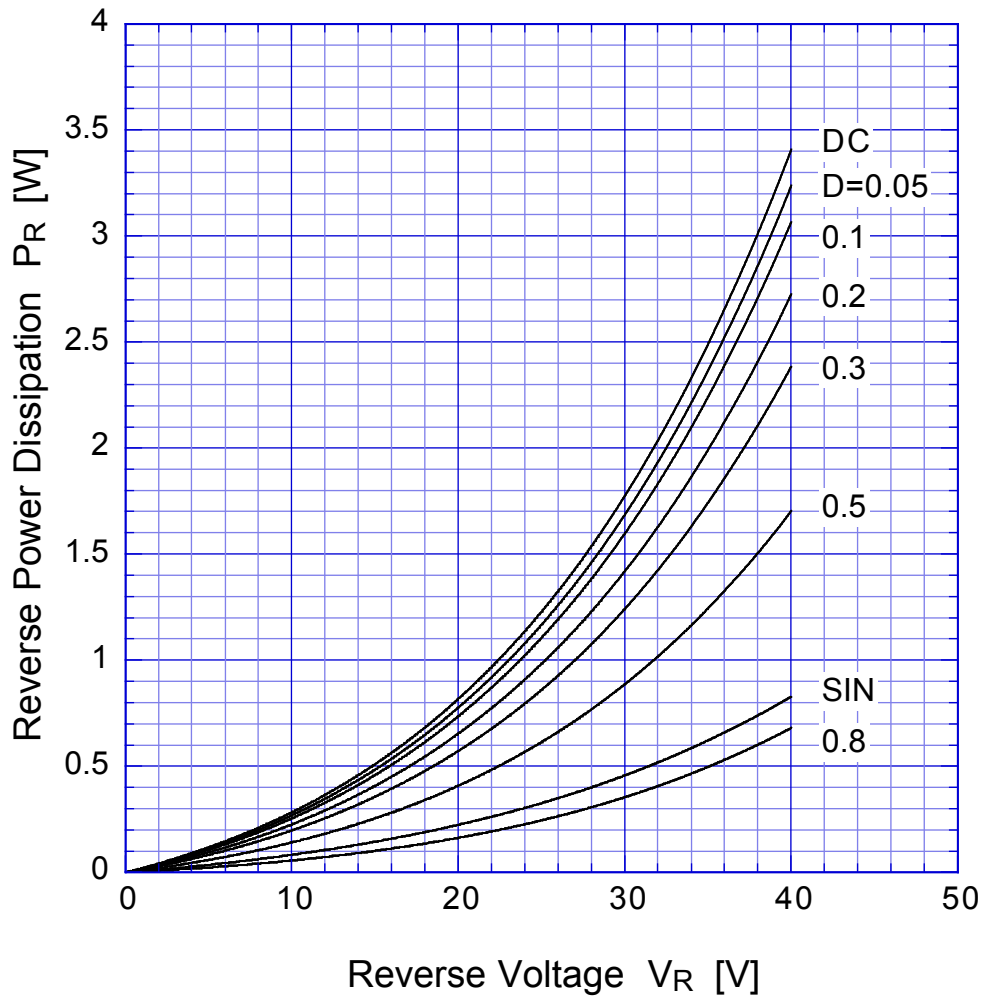
Forward Voltage



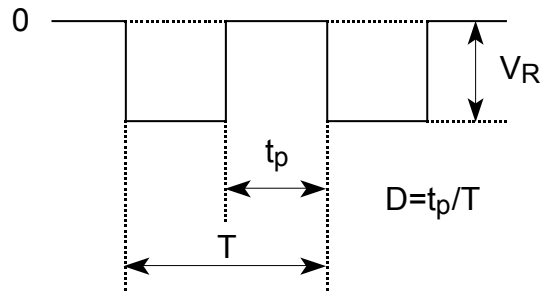
D1FS4A Junction Capacitance



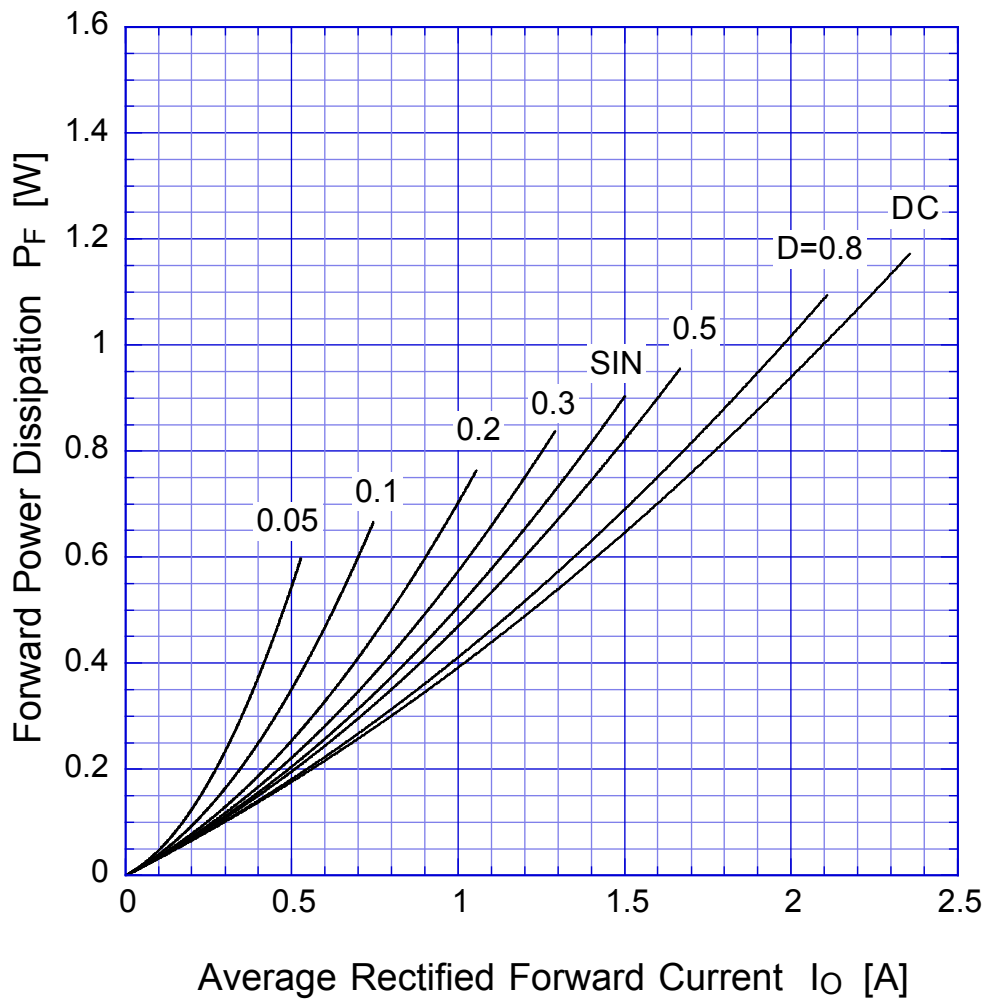
D1FS4A Reverse Power Dissipation



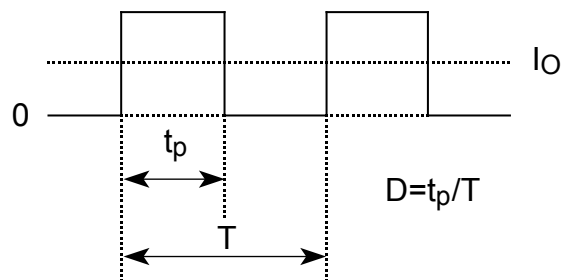
$T_j = 150^\circ\text{C}$



D1FS4A Forward Power Dissipation

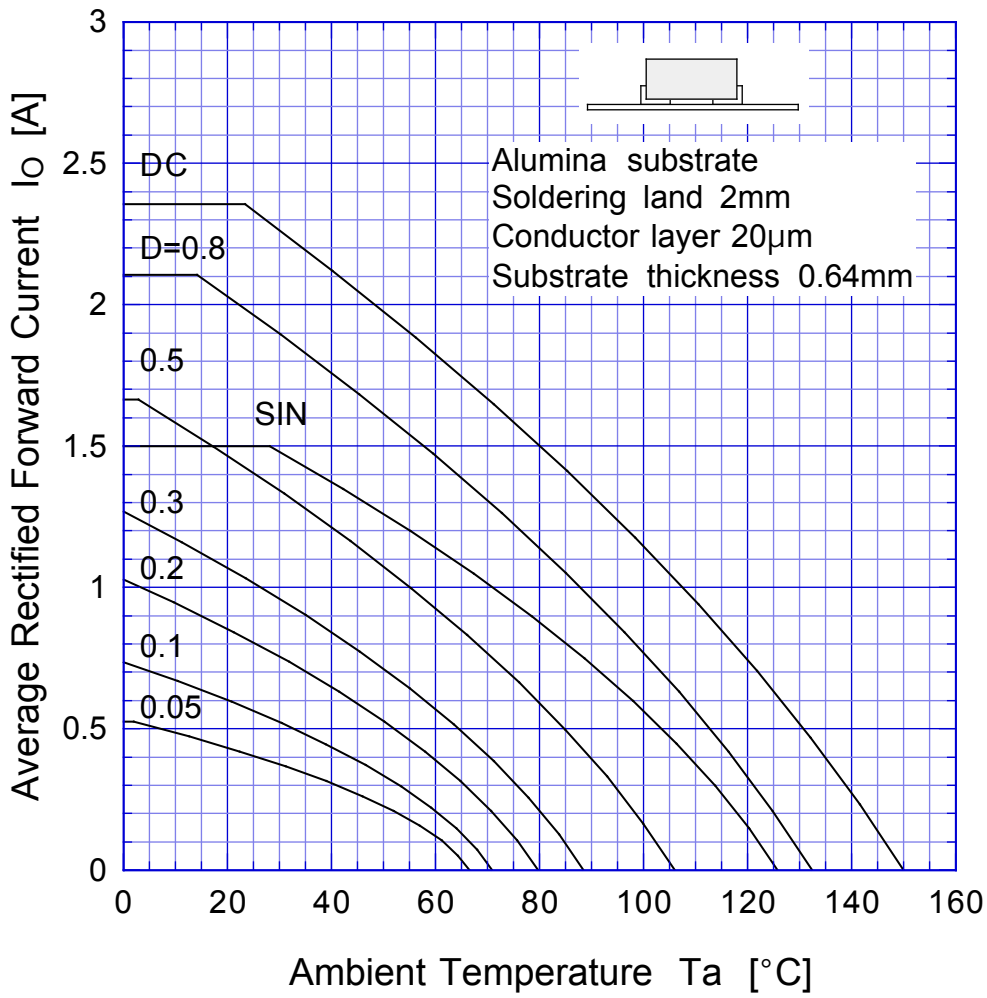


$T_j = 150^\circ\text{C}$

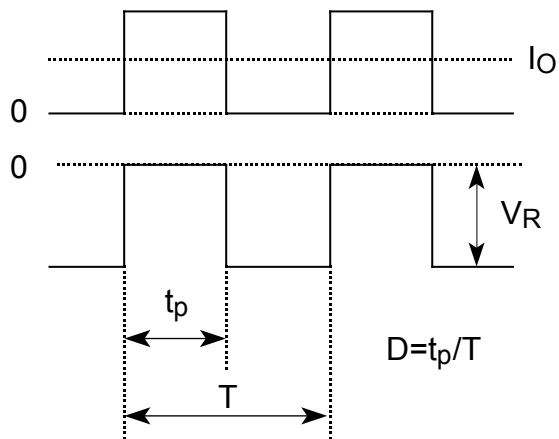


D1FS4A

Derating Curve

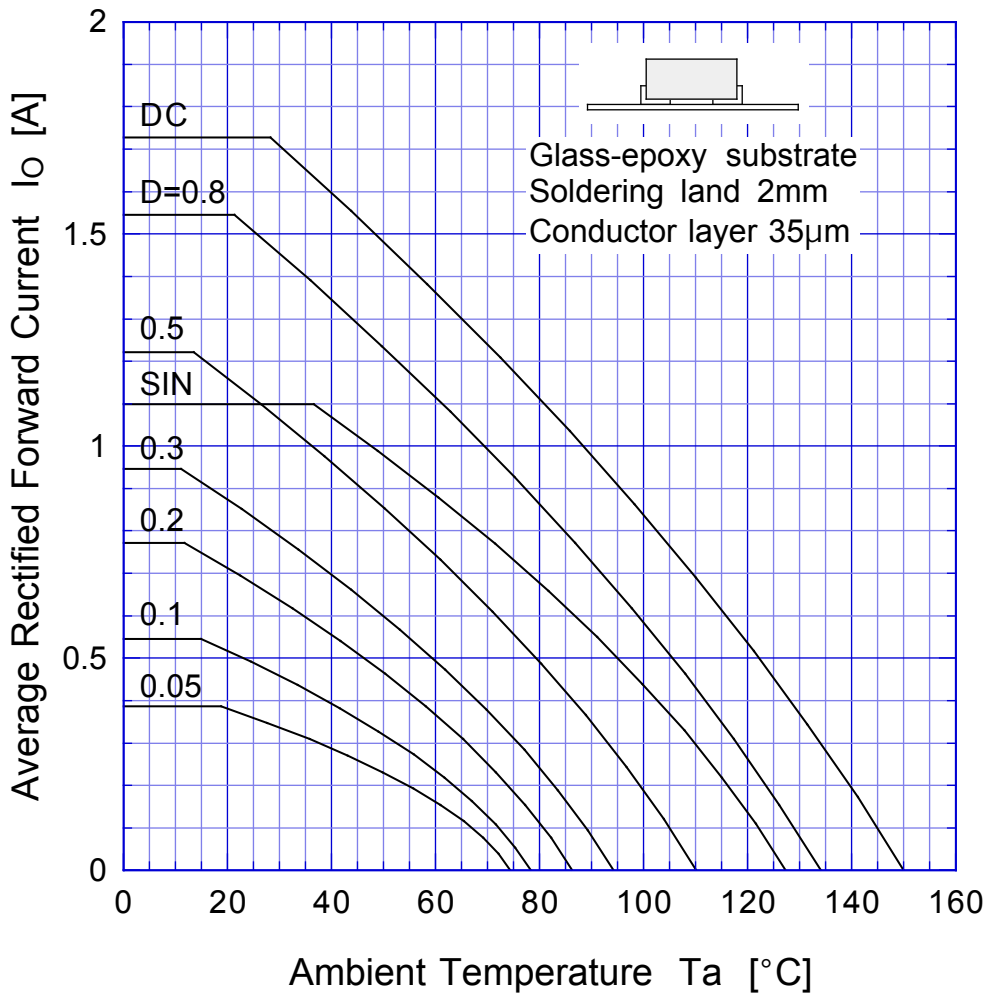


$V_R = 20V$



D1FS4A

Derating Curve

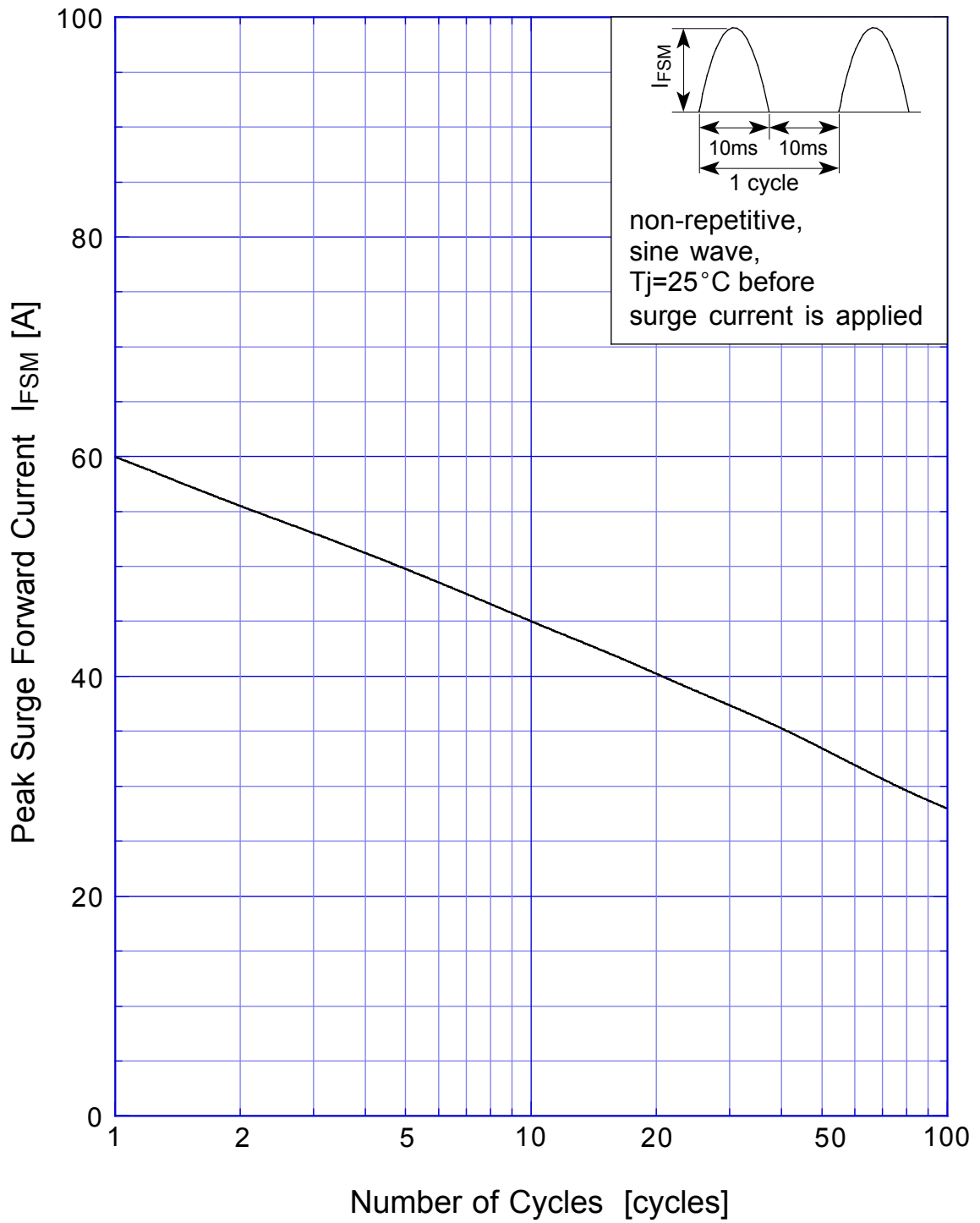


$V_R = 15V$



D1FS4A

Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve



SBD

Repetitive Surge Reverse Power Capability

