SHINDENGEN

Varistor

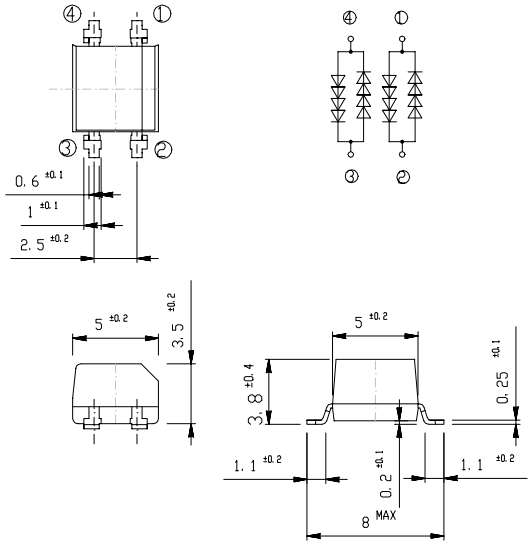
SMD

VRYA6

OUTLINE DIMENSIONS

Case : 1Y

(Unit : mm)



RATINGS

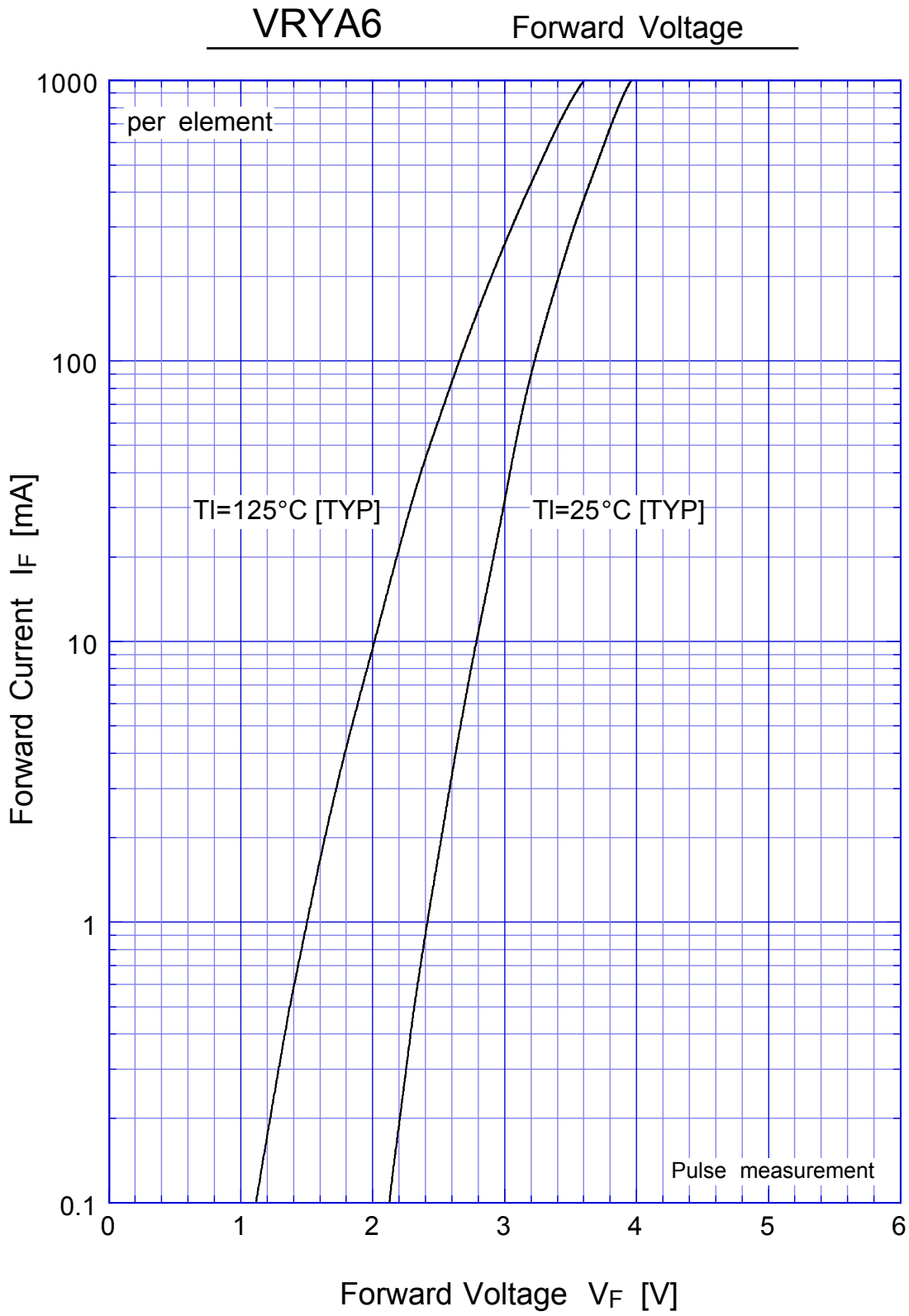
●Absolute Maximum Ratings

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		−30～125	℃
Junction Temperature	Tj		125	℃
Average Rectified Forward Current	I_O	Ta = 40℃, Sine wave, R-load, Commercial frequency, On alumina substrate, 1 element operation	310	mArms
		Ta = 40℃, Sine wave, R-load, Commercial frequency, On alumina substrate, 2 elements operation	200	
		Ta = 40℃, Sine wave, R-load, Commercial frequency, On glass-epoxy substrate, 1 element operation	200	
		Ta = 40℃, Sine wave, R-load, Commercial frequency, On glass-epoxy substrate, 2 elements operation	130	
Peak Surge Forward Current	I_{FSM}	50Hz, Sine wave, Non-repetitive, 2 elements series operation	8	Arms
		10/200 μ s, Non-repetitive, 2 elements series operation	65	A
		10/1000 μ s, Non-repetitive, 2 elements series operation	30	A

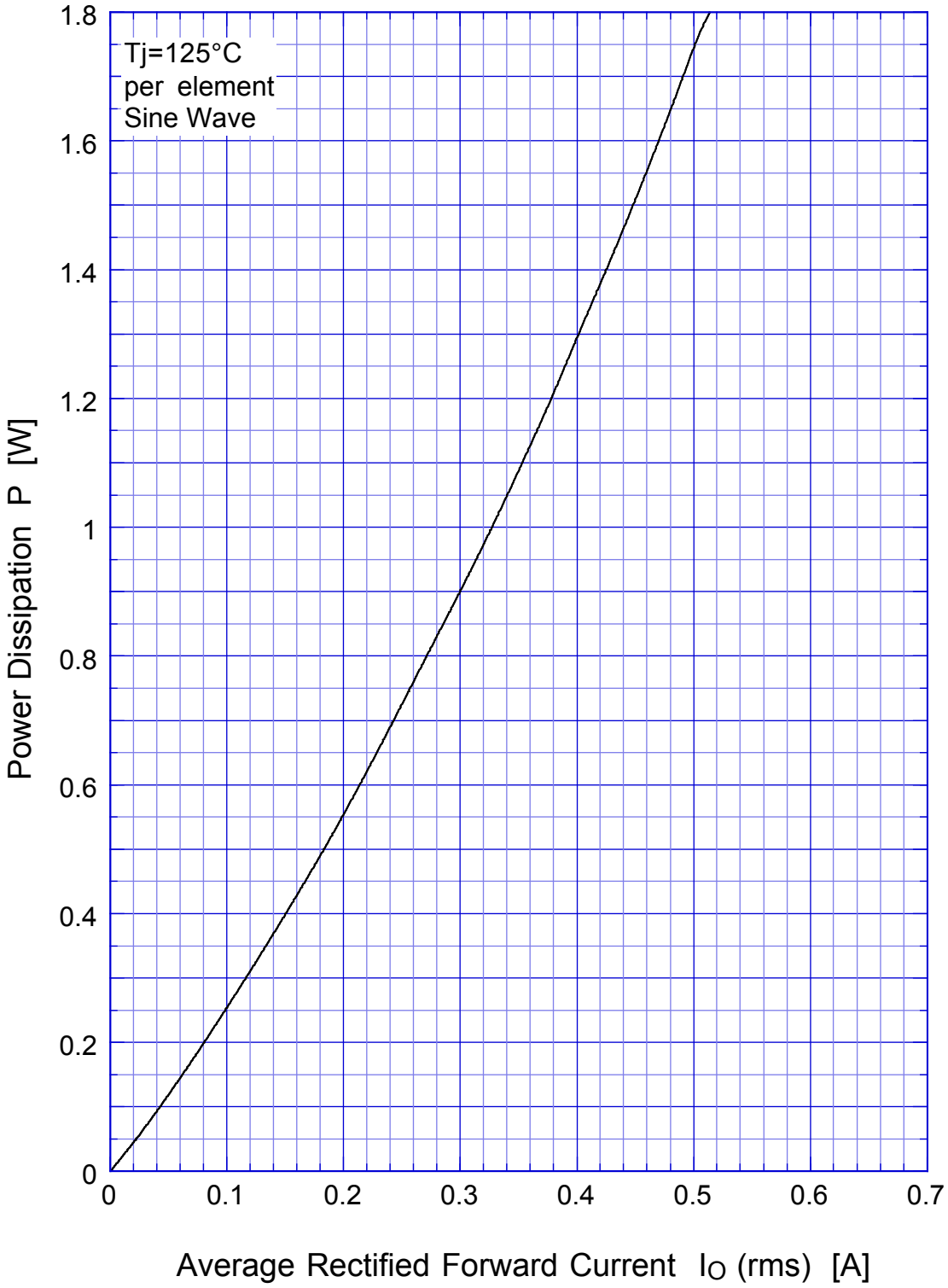
●Electrical Characteristics (Tl=25℃)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F = 1mA, 1 element	2.05～2.55	V
		I_F = 1mA, 2 elements series	4.10～5.10	
		I_F = 10mA, 1 element	2.50～3.00	
		I_F = 10mA, 2 elements series	5.00～6.00	
		I_F = 70mA, 1 element	2.85～3.35	
		I_F = 70mA, 2 elements series	5.70～6.60	
Junction Capacitance	Cj	f = 100kHz, V_D = 0V, OSC = 50mV	TYP 13	pF
Thermal Resistance	θ ja	Junction to ambient, On alumina substrate, 1 element operation	MAX 90	℃/W
		Junction to ambient, On alumina substrate, 2 elements operation	MAX 150	
		Junction to ambient, On glass-epoxy substrate, 1 element operation	MAX 150	
		Junction to ambient, On glass-epoxy substrate, 2 elements operation	MAX 250	

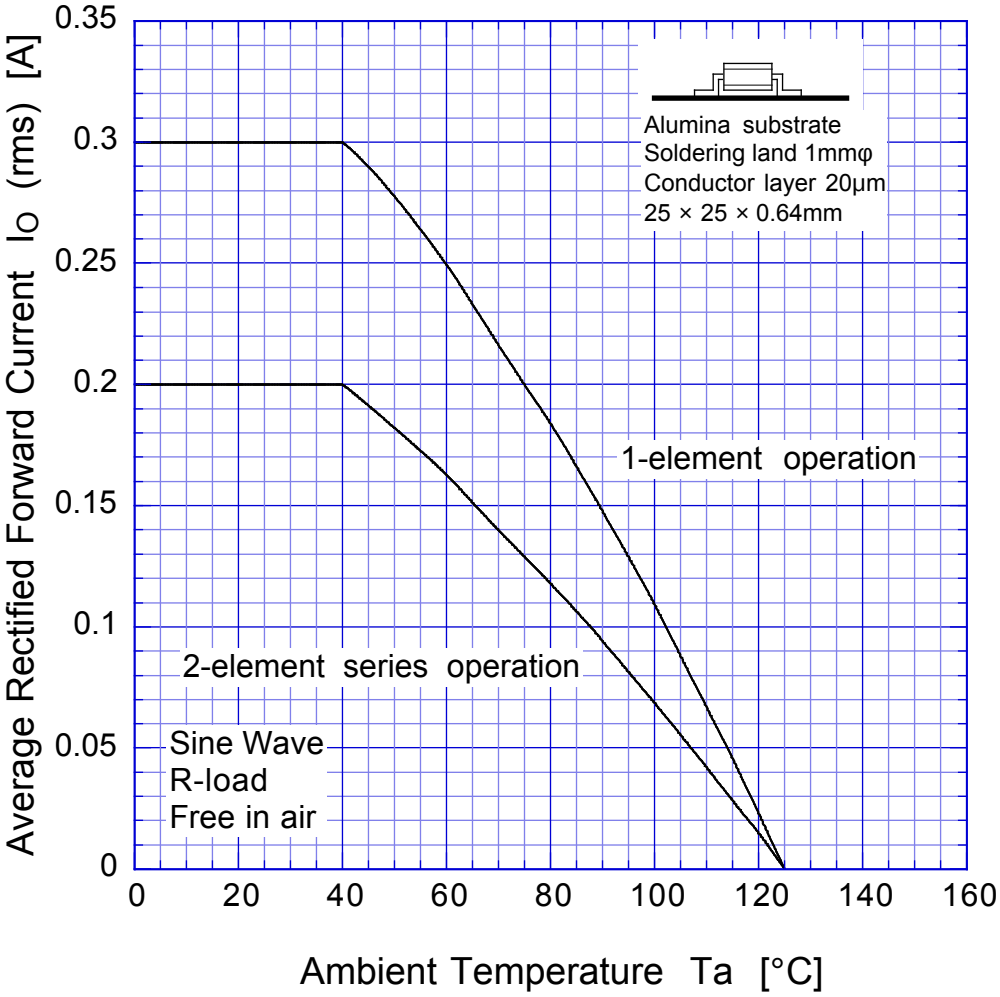
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VRYA6
Forward Voltage
per element
Tl=125°C [TYP]
Tl=25°C [TYP]
Pulse measurement
1000
100
10
1
0.1
0
1
2
3
4
5
6
Forward Current IF [mA]
Forward Voltage VF [V]

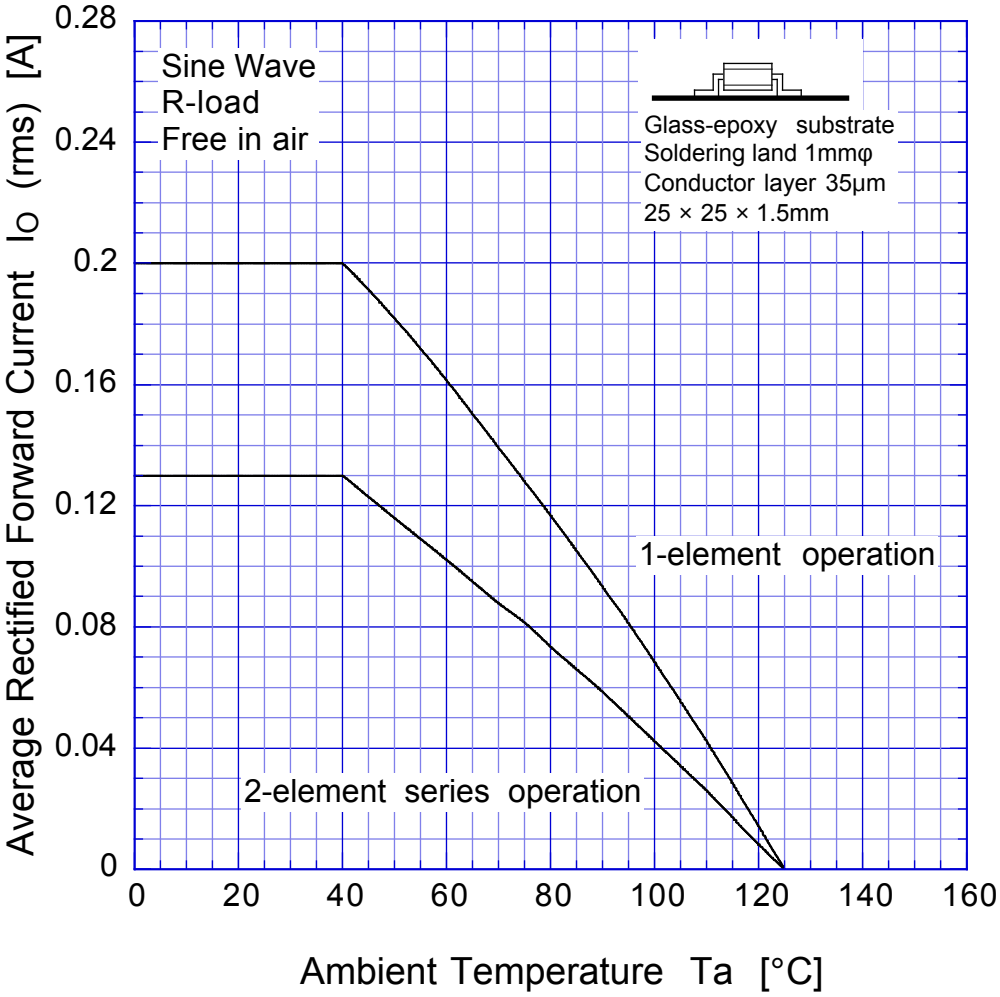
VRYA6 Forward Power Dissipation



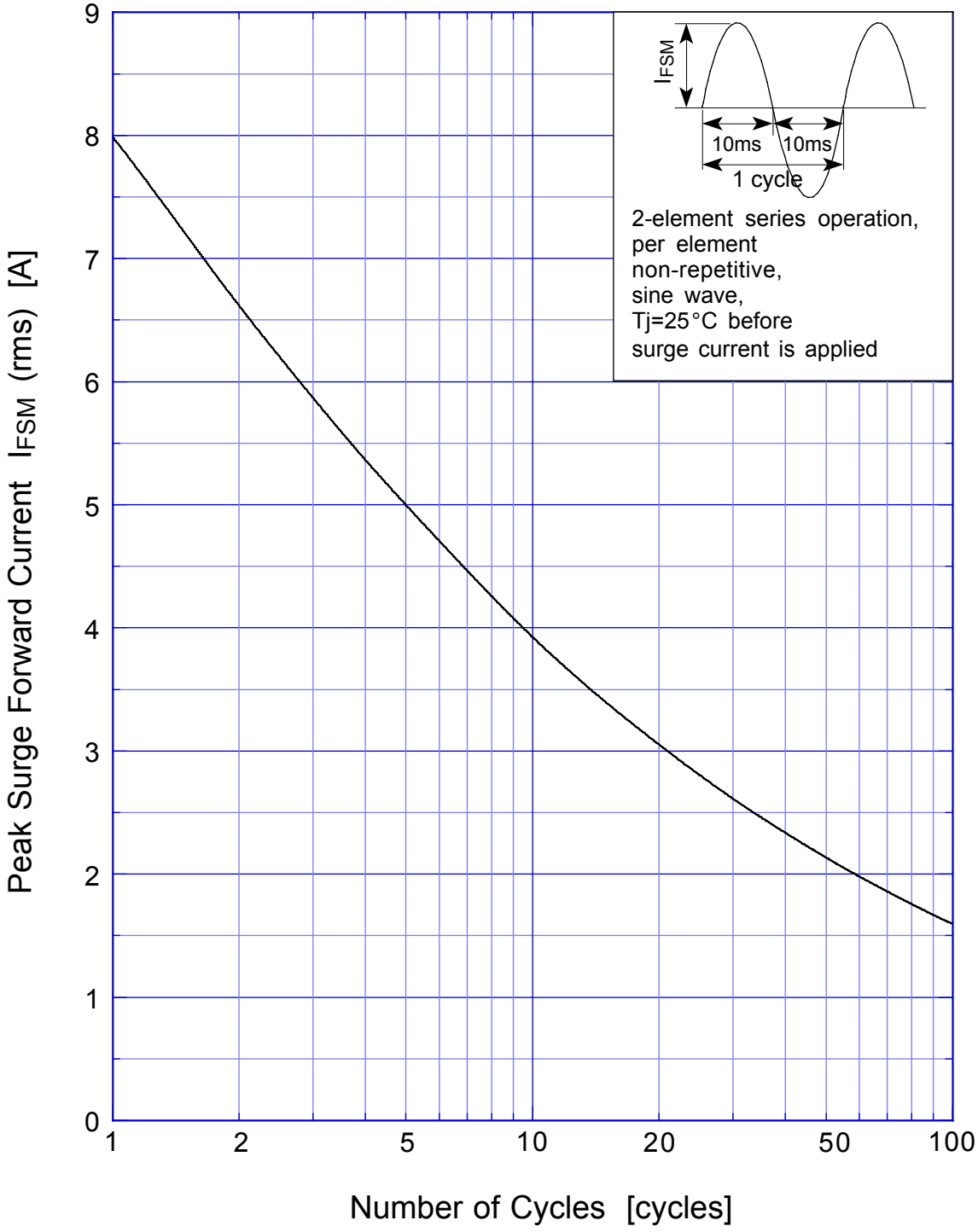
VRYA6 Derating Curve

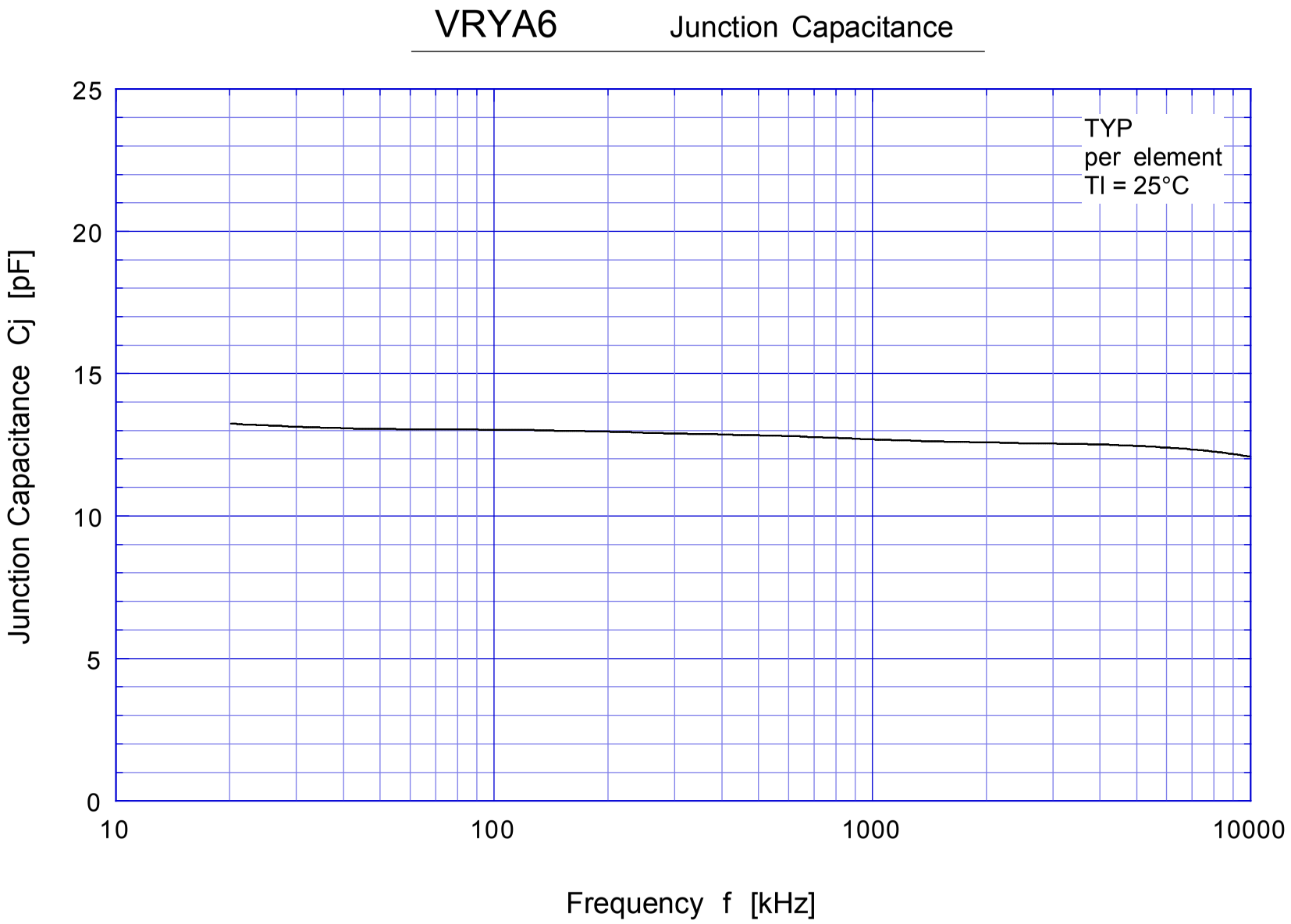


VRYA6 Derating Curve



VRYA6 Peak Surge Forward Capability




VRYA6
Junction Capacitance
TYP
per element
Tl = 25°C
Junction Capacitance Cj [pF]
25
20
15
10
5
0
10
100
1000
10000
Frequency f [kHz]