

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current -1 A

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg / 0.00053oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View

Marking Code : A1-A7

Simplified outline SOD-123FL and symbol

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	VC4001W	VC4002W	VC4003W	VC4004W	VC4005W	VC4006W	VC4007W	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T _c = 125 °C	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V _F	1.1							V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5 50							pA
Typical Junction Capacitance (1)	G	8(TYP.)							PF
Typical Thermal Resistance ' J	R _{QJA}	90							°C /W
Operating and Storage Temperature Range	T _j , T _{stg}	-55-+150							°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5X5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

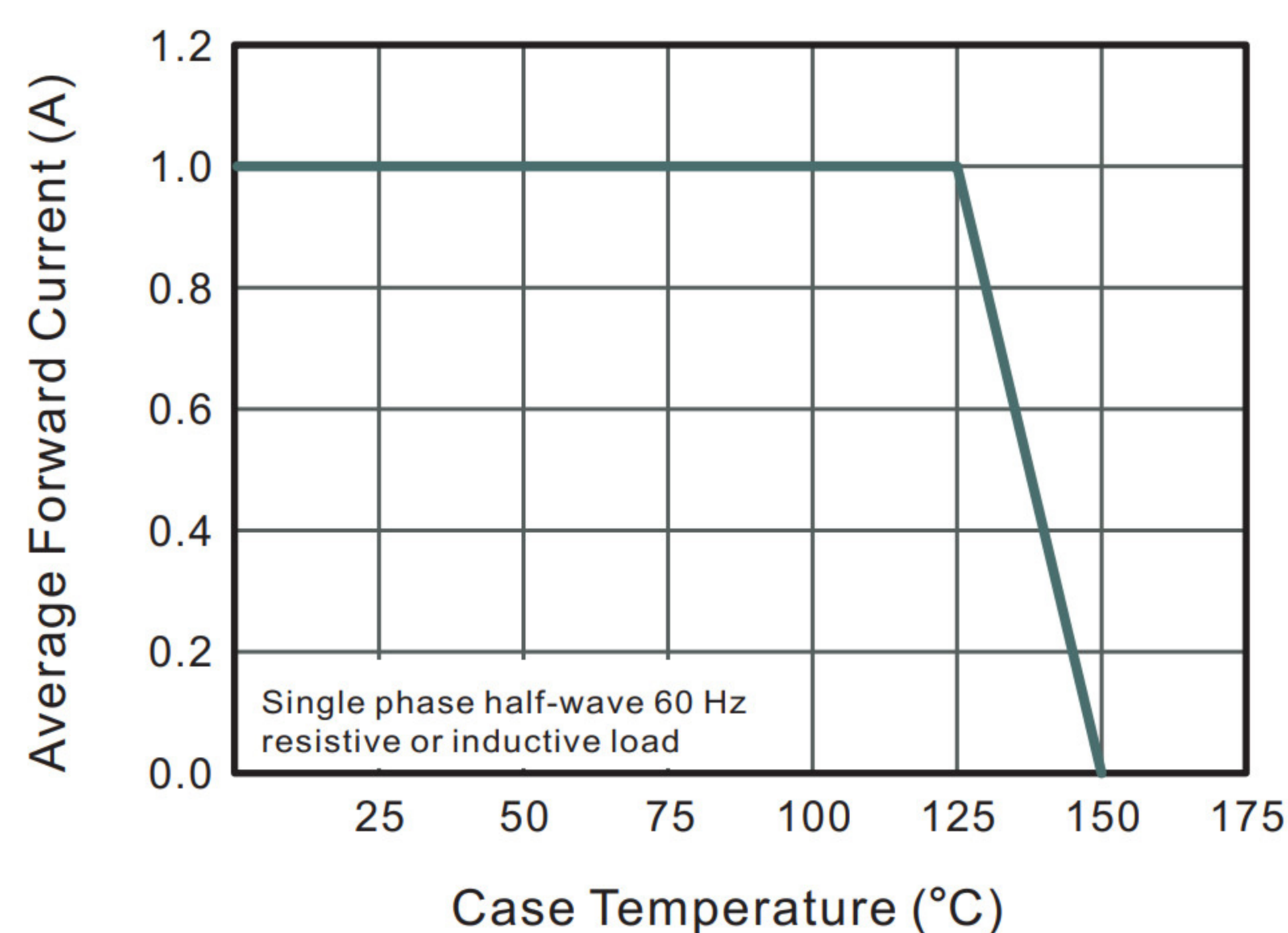


Fig.2 Typical Instaneous Reverse Characteristics

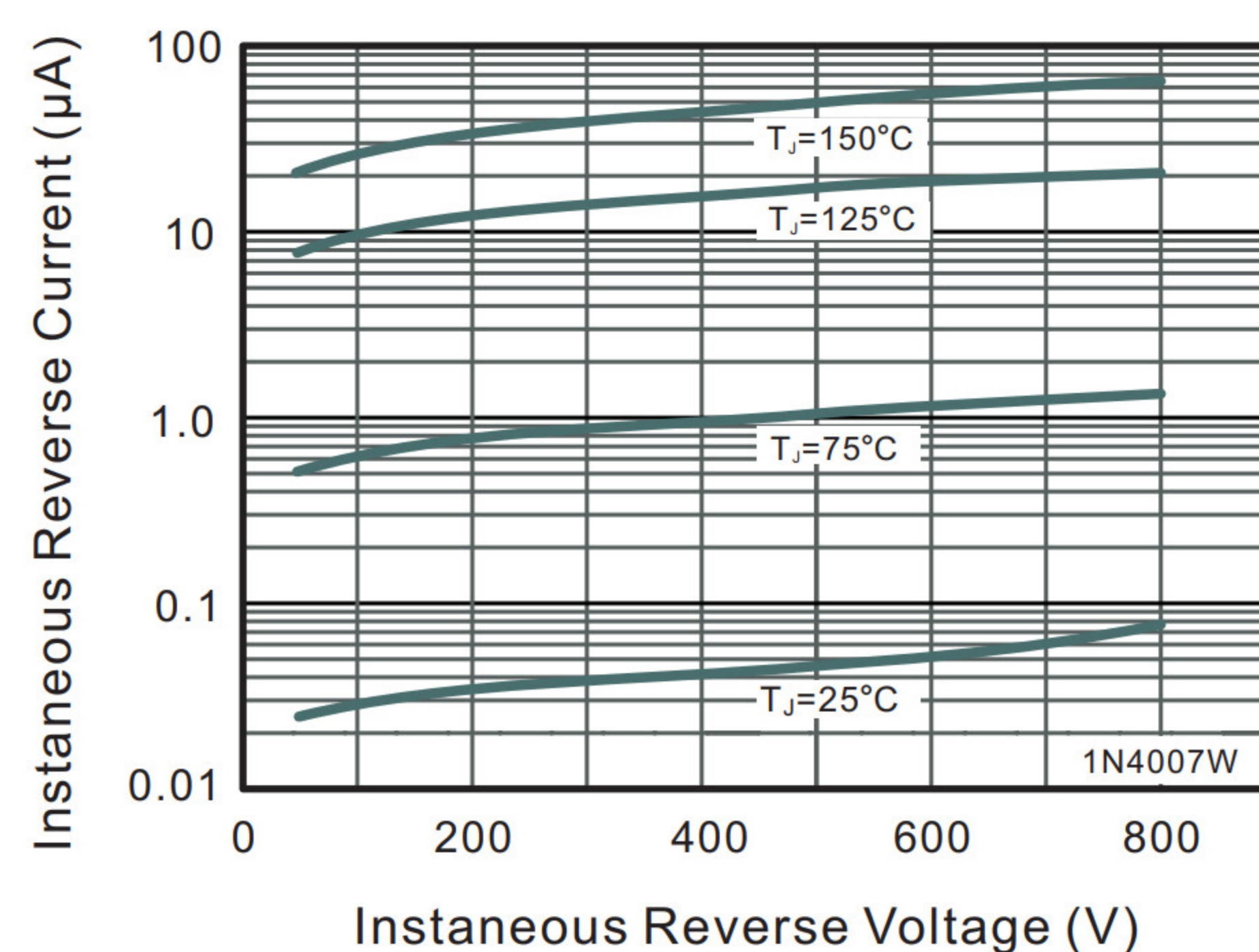


Fig.3 Typical Forward Characteristic

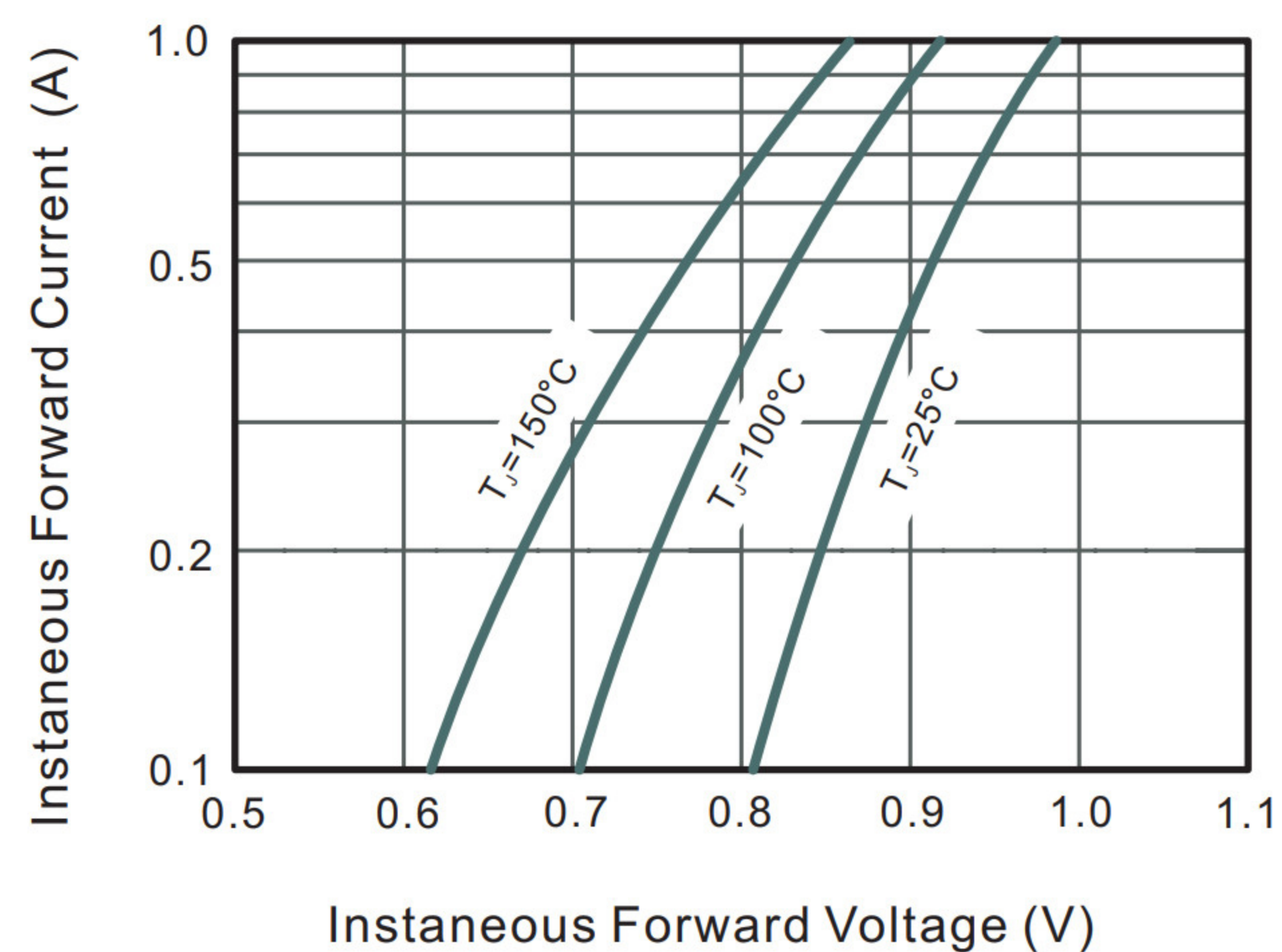


Fig.4 Typical Junction Capacitance

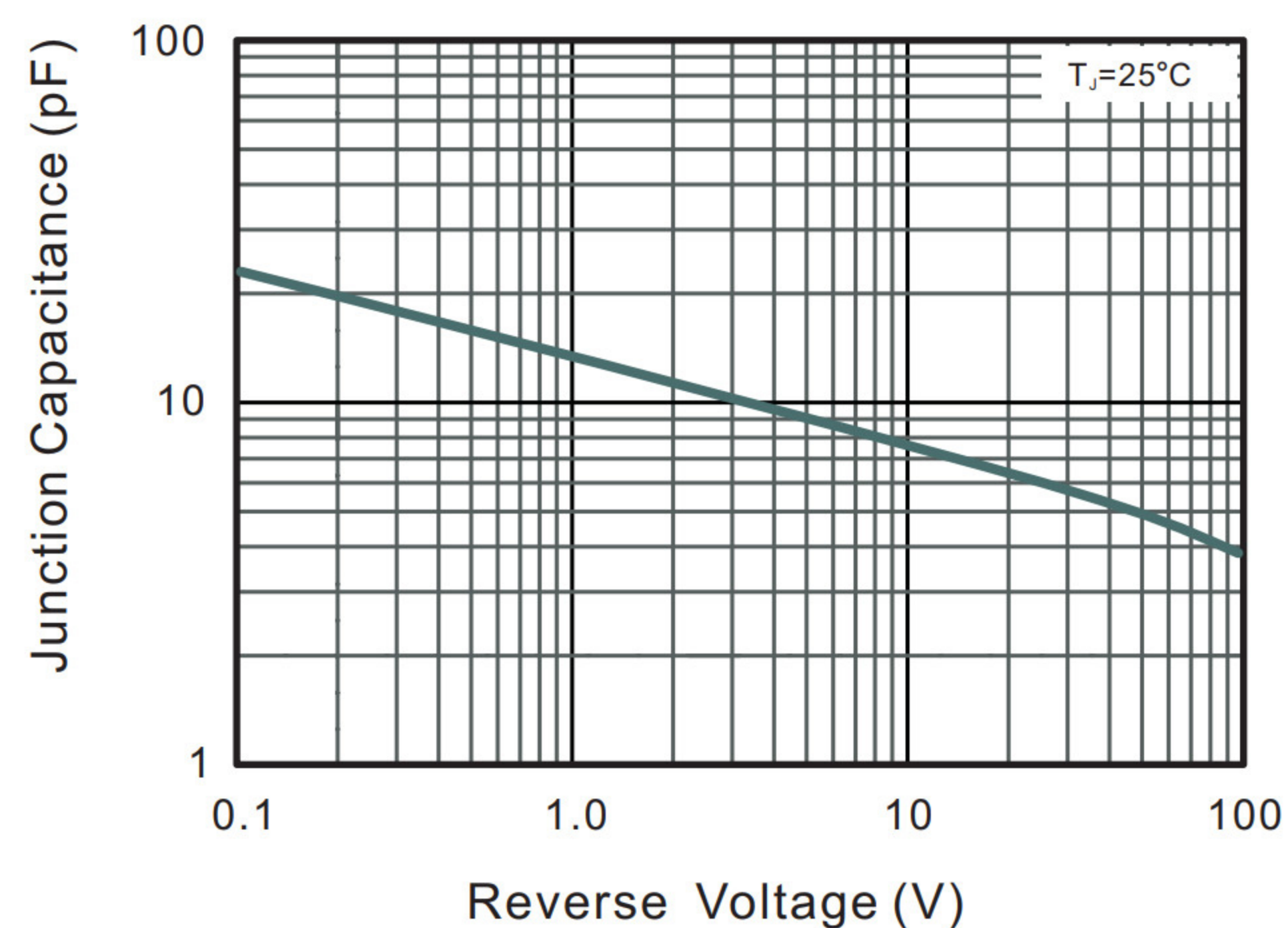
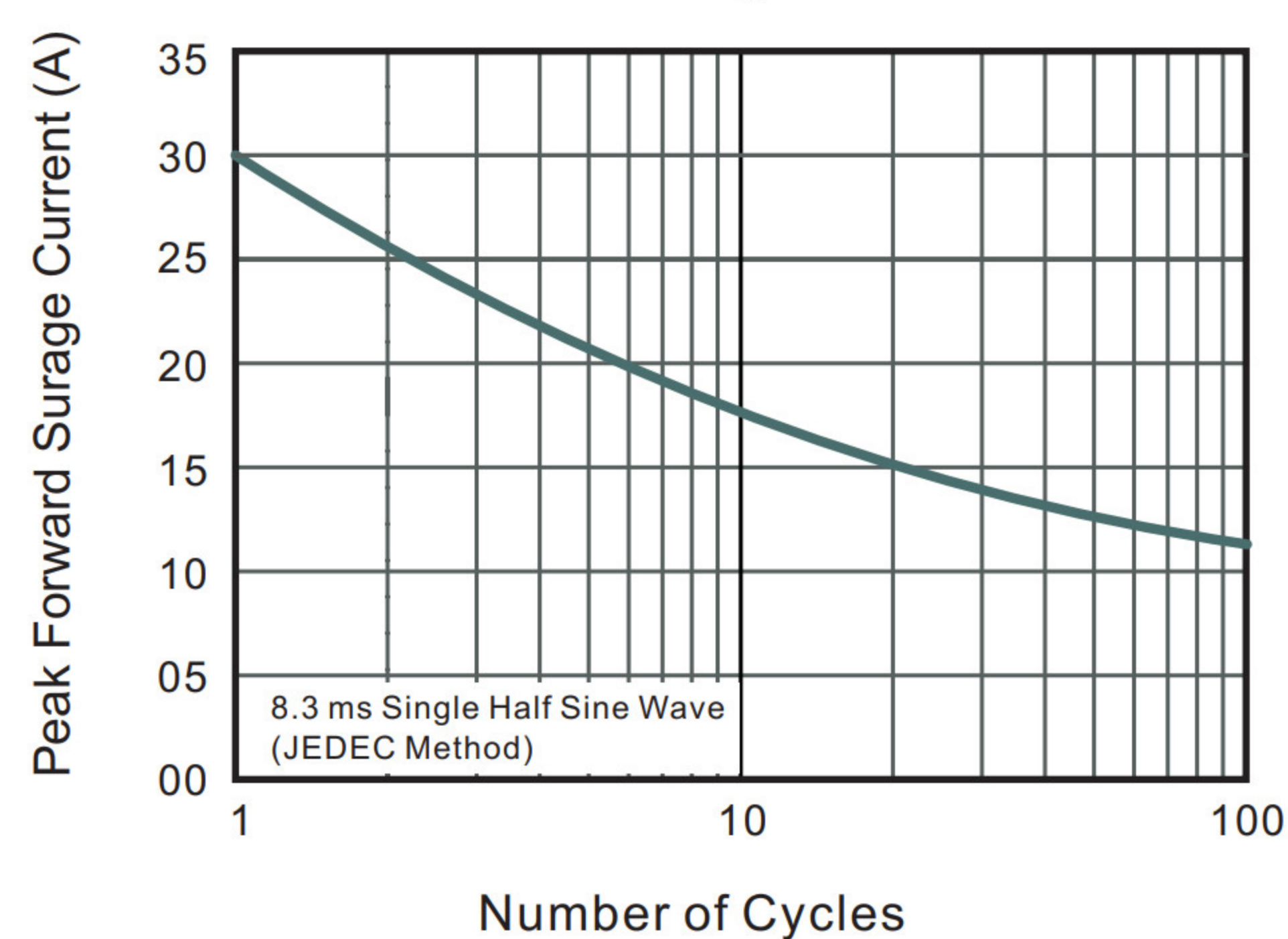


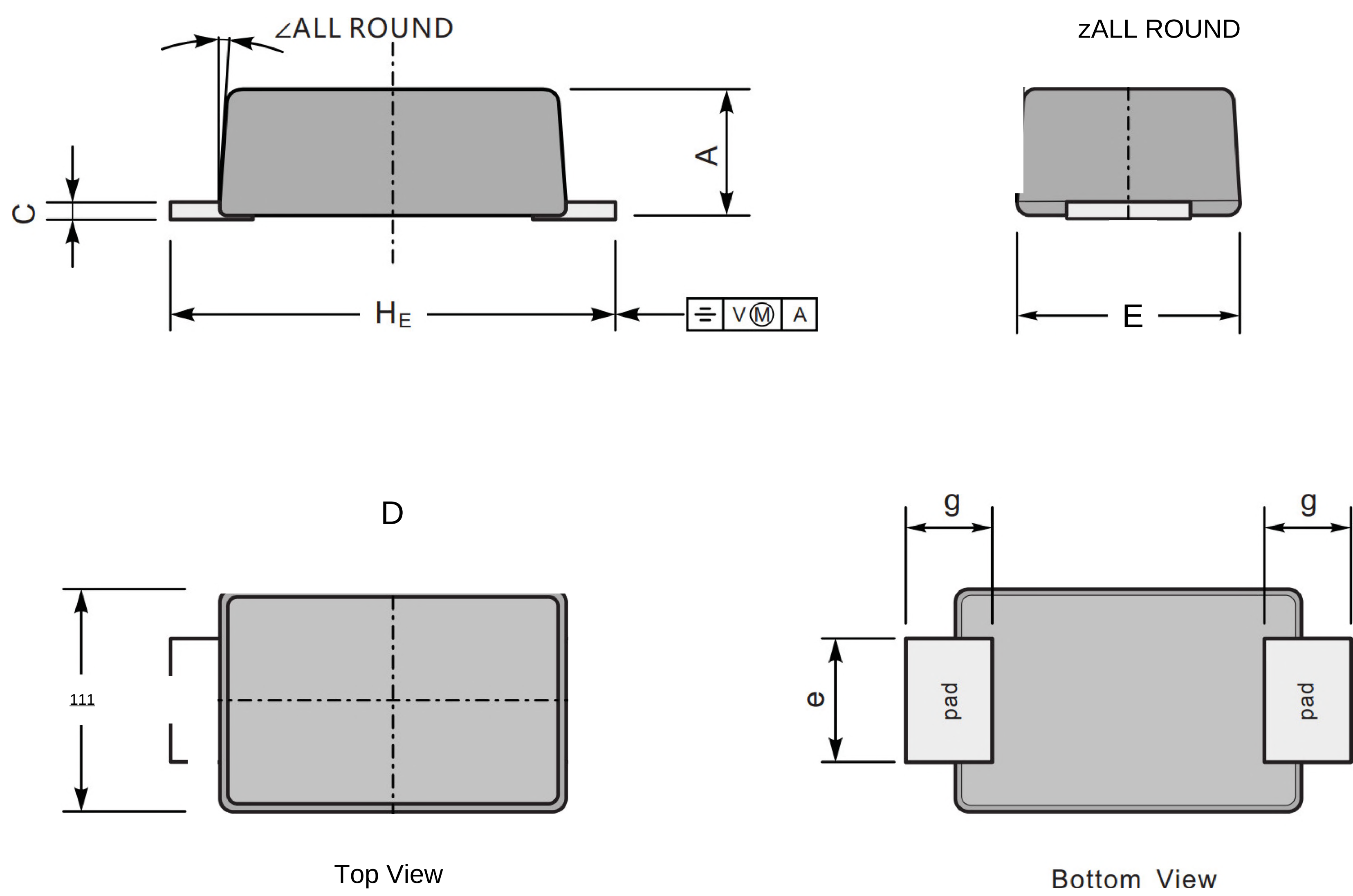
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

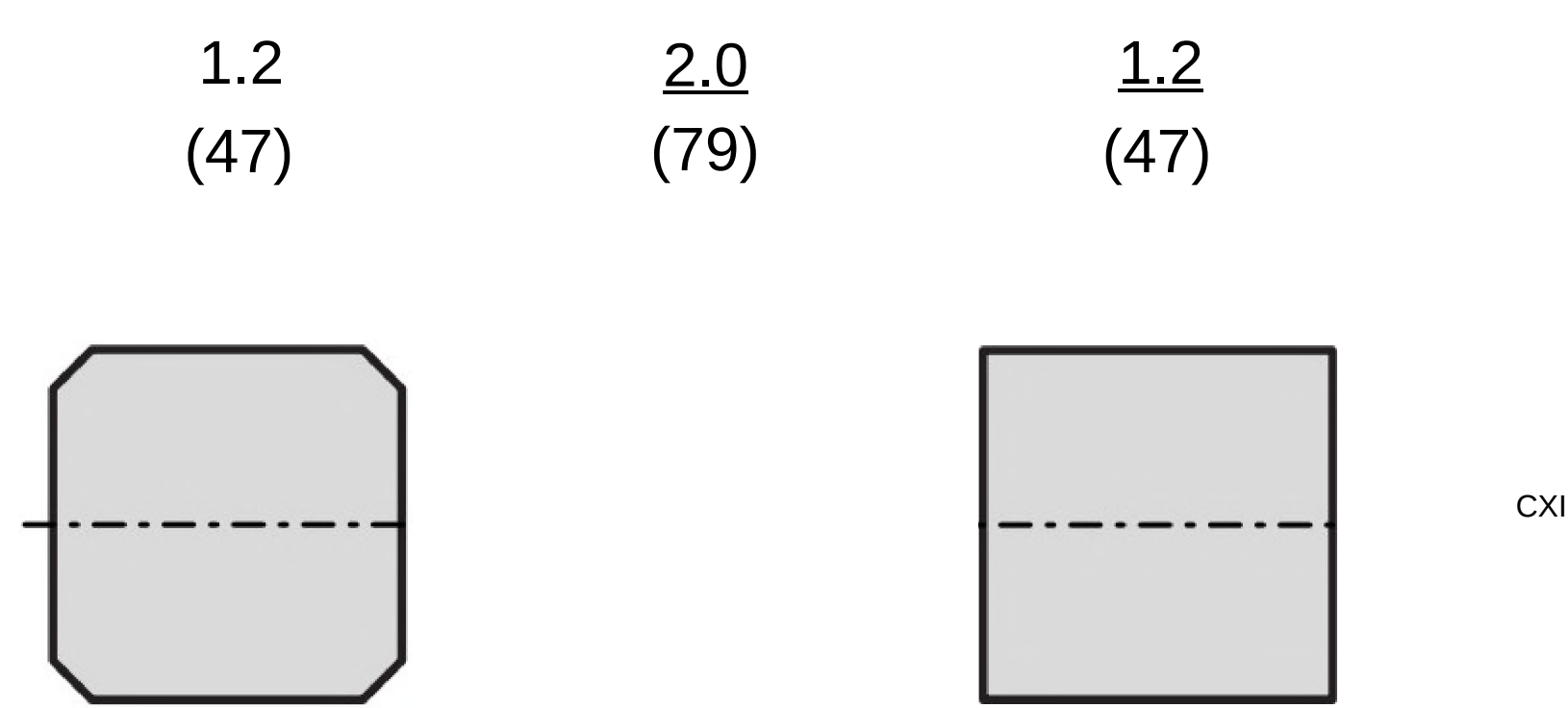
Plastic surface mounted package; 2 leads

SOD-123



UNIT		A	C	D	E	e	g	HE	Z
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

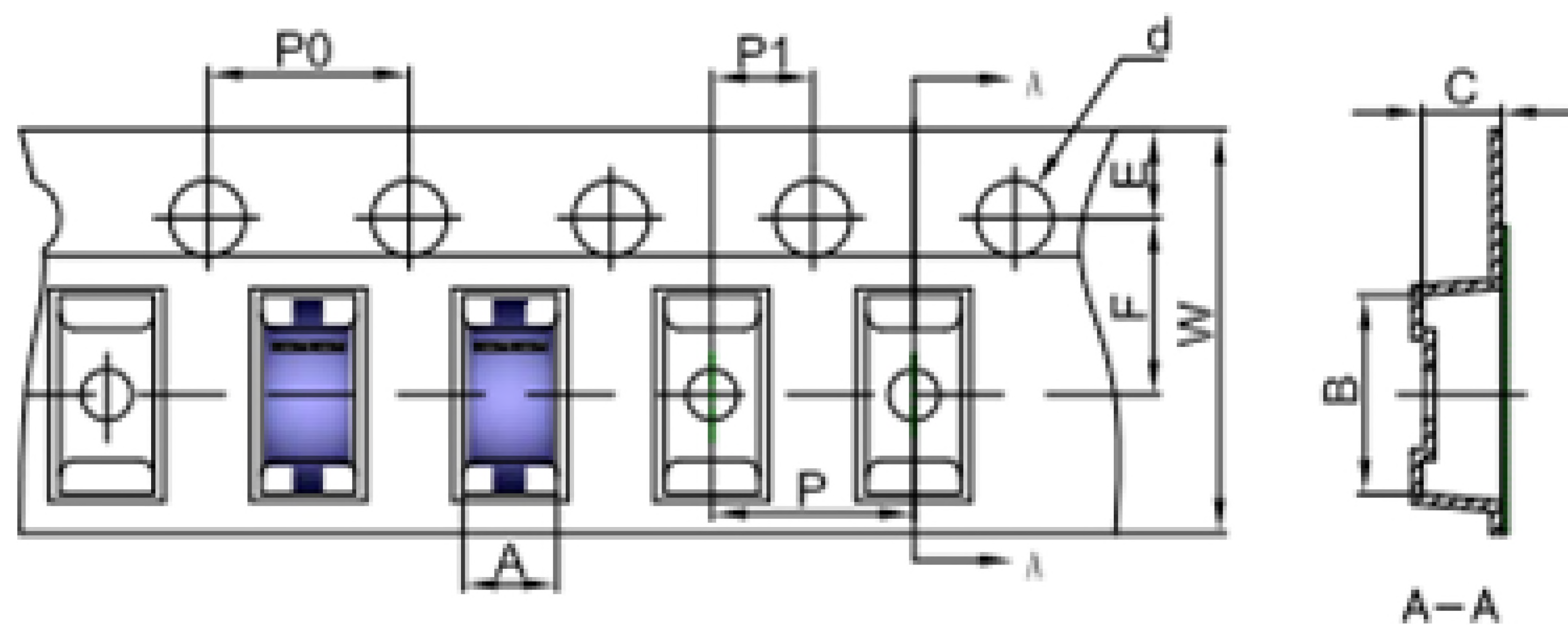
The recommended mounting pad size



Marking

Type number	Marking code
VC4001W	A1
VC4002W	A2
VC4003W	A3
VC4004W	A4
VC4005W	A5
VC4006W	A6
VC4007W	A7

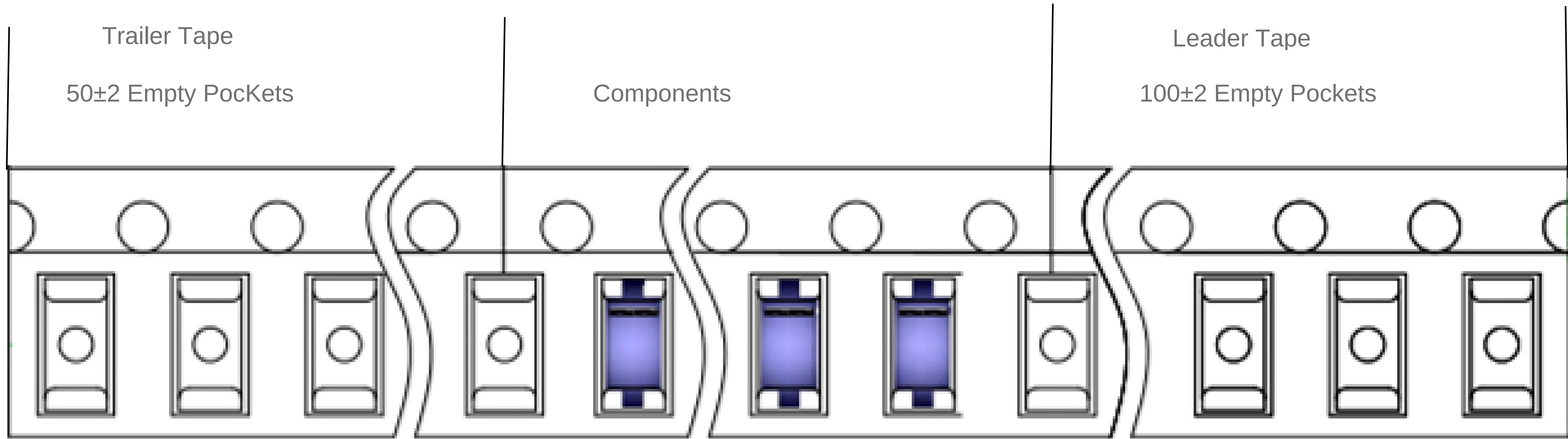
SOD-123 Embossed Carrier Tape



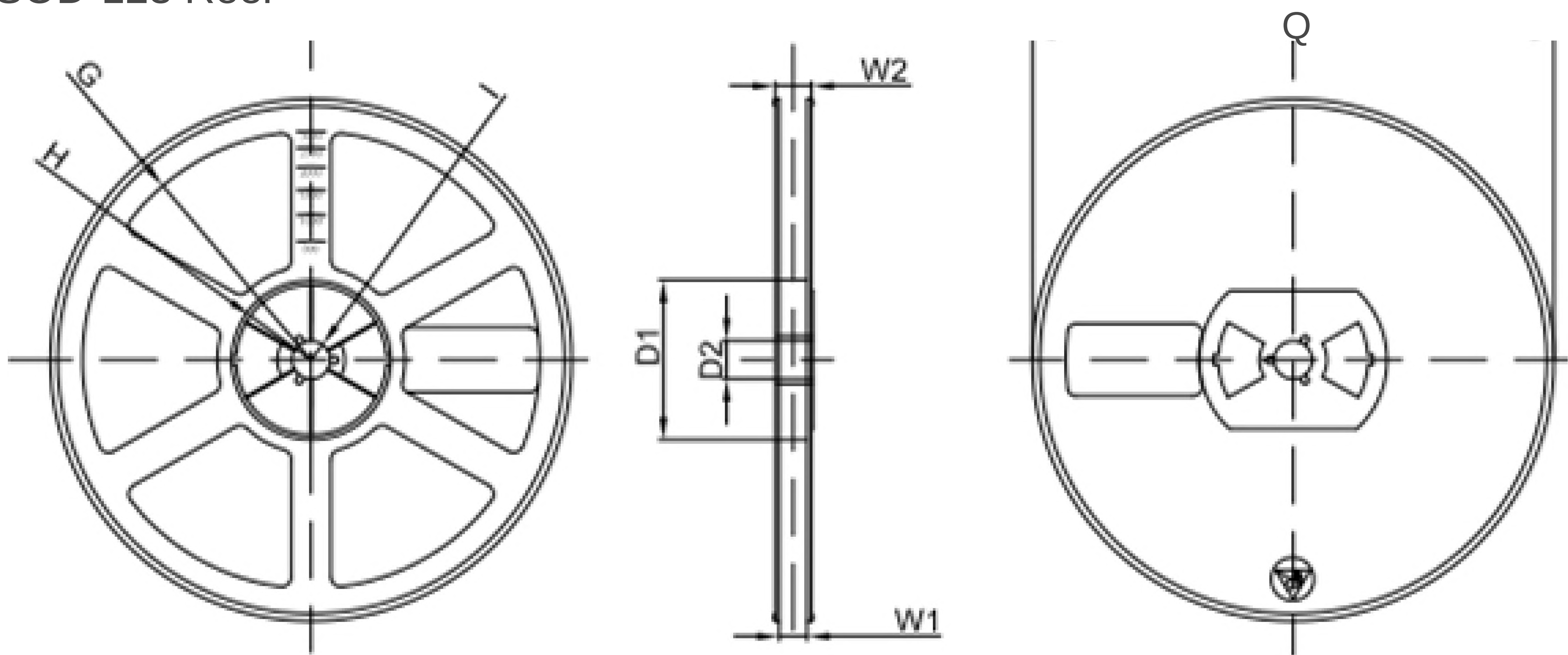
Packaging Description:
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and are made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	D	E	F	PO	P	P1	w
SOD-123	1.05	3.95	1.57	ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	1	W1	W2
7"Dia	ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size (mm)	Carton	Carton Size(mm)	G.W. (kg)
3000 pcs	7 inch	45000pcs	203*203*195	18000pcs	438*438*220	