

### DO-214AC (SMC)

Dimensions in inches and (millimeters)

#### FEATURES

- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High surge current capability
- Low forward voltage drop
- Guard ring for over-voltage protection
- Also available in SMA (Suffix A) and SMB (Suffix B) sizes

#### MECHANICAL DATA

- Molded plastic body (UL 94V-0 rated)
- Terminals: Solder plated
- Polarity: Indicated by cathode band
- Packaging: 16mm tape EIA STD RS-481
- Weight: 0.21 grams

#### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

Parameter	Symbol	SS32	SS33	SS34	SS35	SS36	SS38	SS310	SS315	SS320	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	V
Maximum Average Forward Rectified Current @ T <sub>L</sub> = 90°C	I <sub>F(AV)</sub>	3.0									A
Peak Forward Surge Current 8.3ms Single Half-Sine Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	100.0									A
Maximum Instantaneous I <sub>F</sub> = 3.0A (note)	V <sub>F</sub>	0.50			0.75		0.85		0.90		V
Maximum DC Reverse Current @ T <sub>A</sub> = 25°C at rated DC Blocking Voltage @ T <sub>A</sub> = 100°C	I <sub>R</sub>	0.5									mA
		20					10				
Typical Thermal Resistance Junction to Lead	R <sub>θJA</sub>	17.0									°C / W
Operating Temperature Range	T <sub>J</sub>	-55 to +150									°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +125									°C

Note: Pulse Test Width: 300 μSec, 1% Duty Cycle.

**RATING & CHARACTERISTIC CURVES**

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

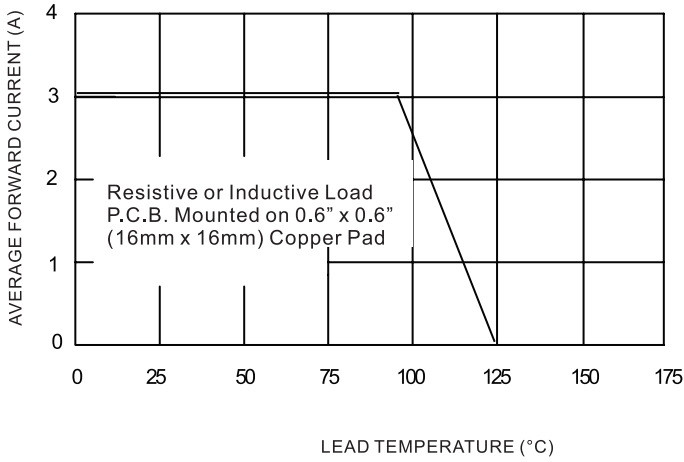


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

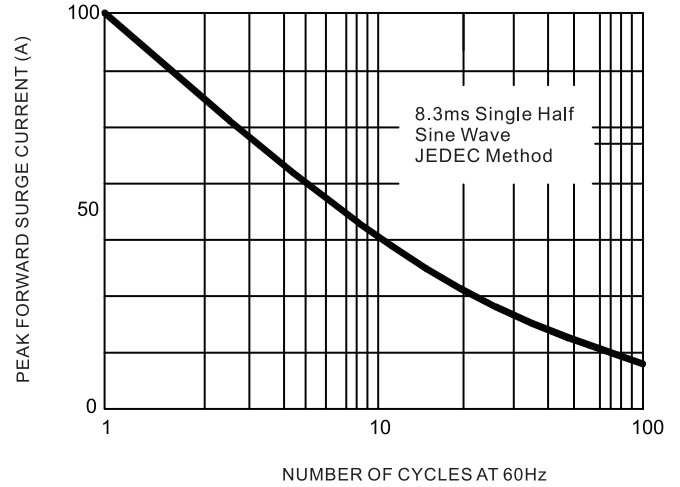
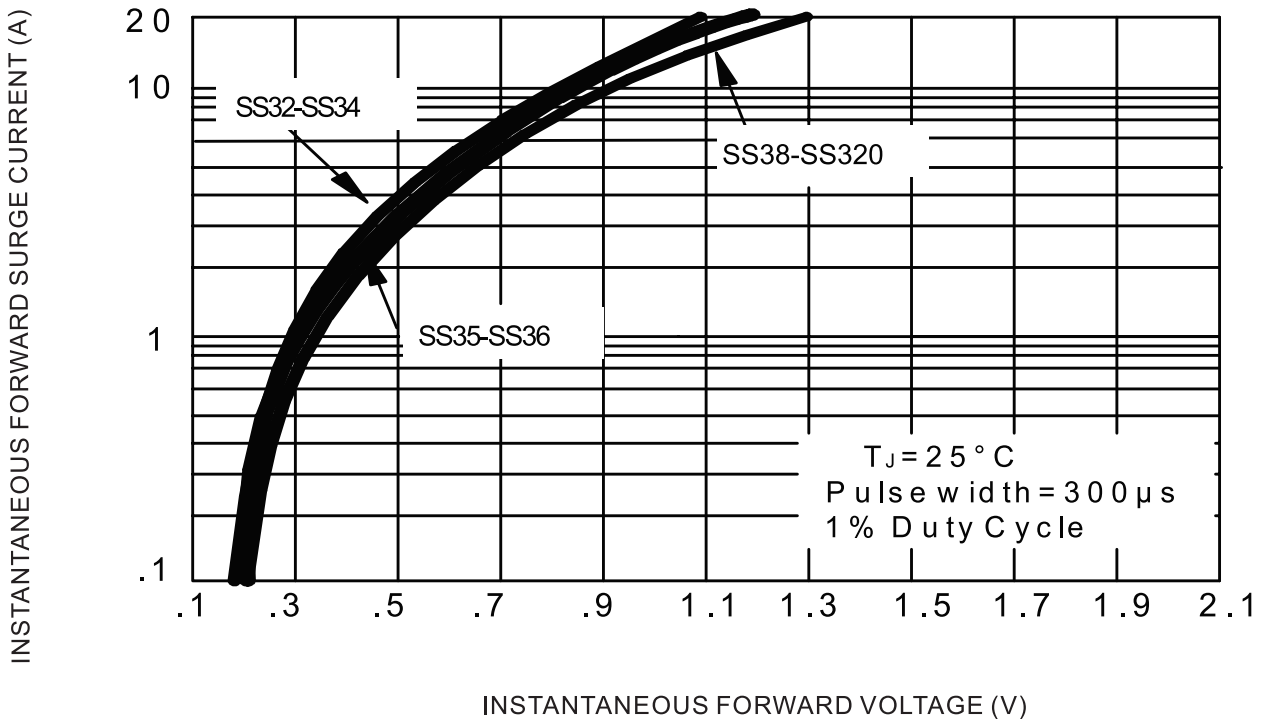
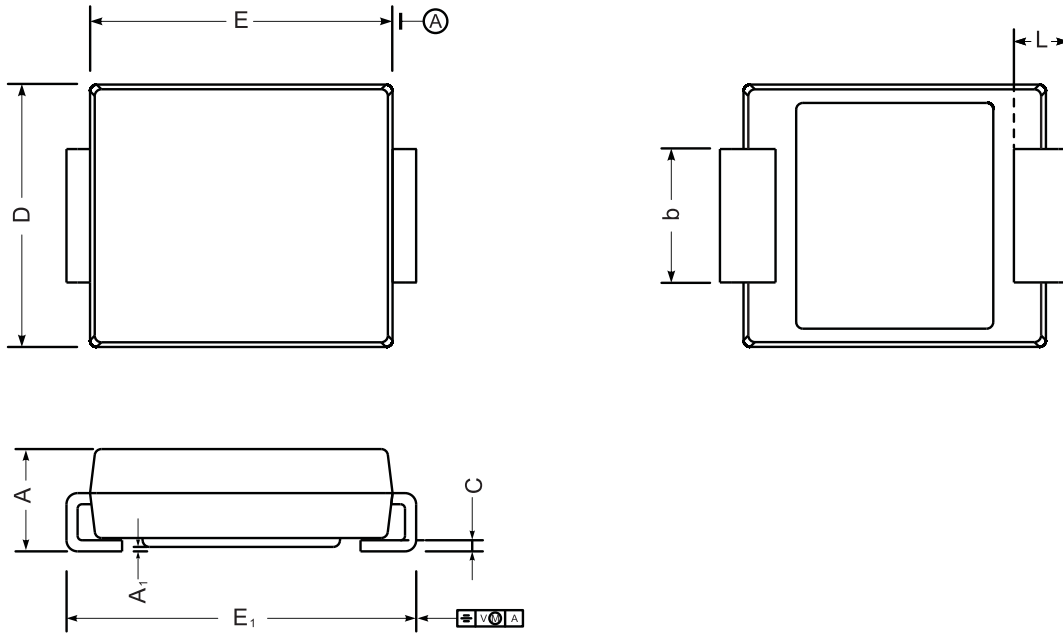


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



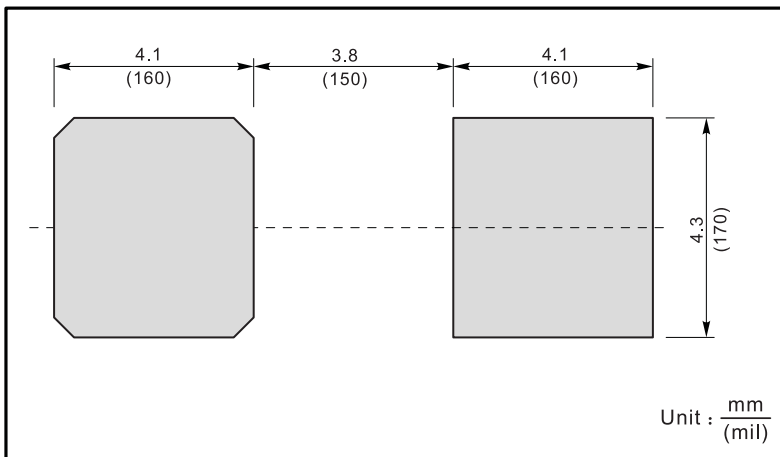
■ **PACKAGE OUTLINE**



SMC mechanical data

UNIT		A	E	D	E <sub>1</sub>	A <sub>1</sub>	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108

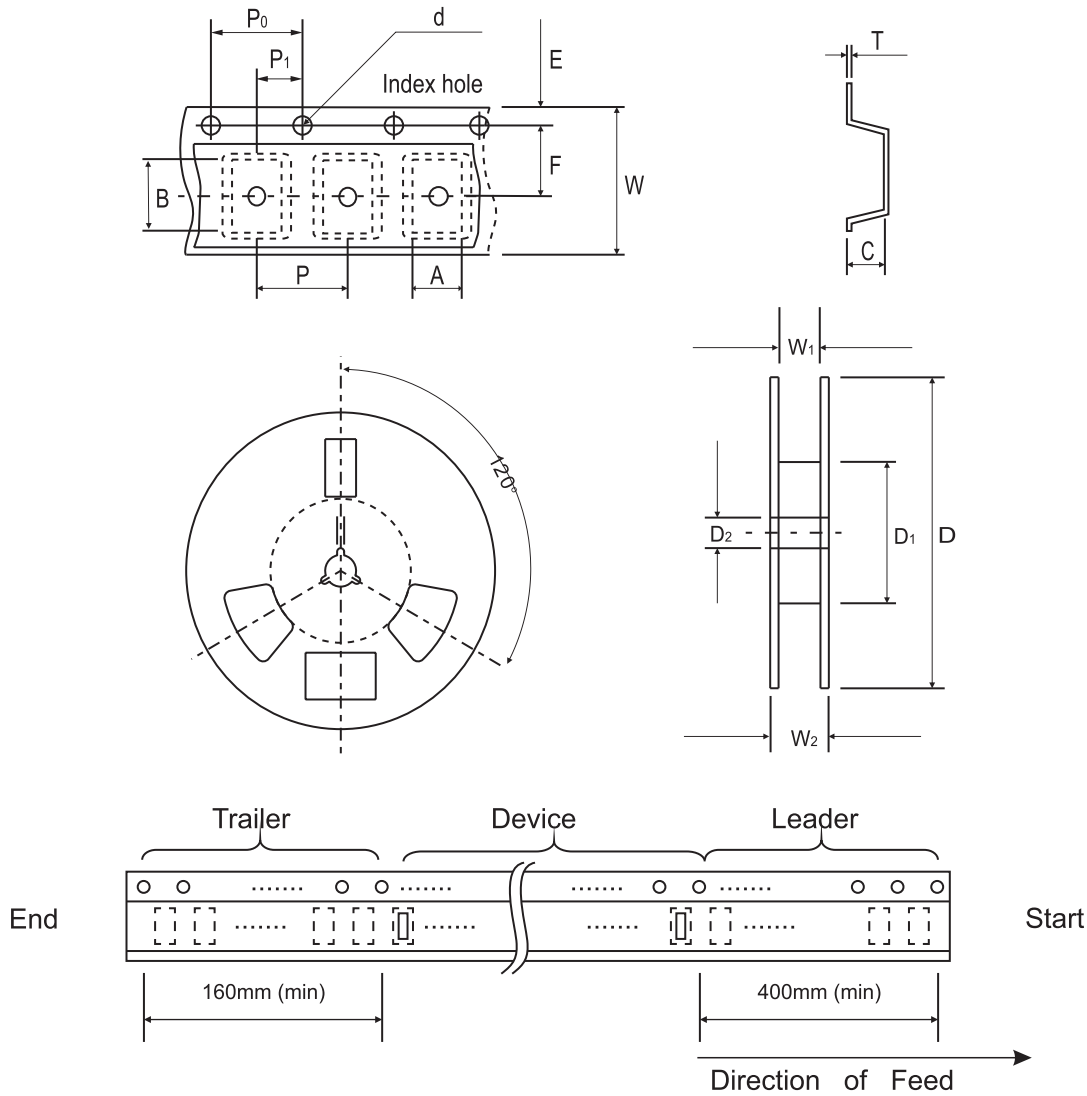
**The recommended mounting pad size**



**Marking**

Type number	Marking code
SS32C	SS32
SS34C	SS34
SS36C	SS36
SS38C	SS38
SS310C	SS310
SS312C	SS312
SS315C	SS315
SS320C	SS320

**REEL TAPING SPECIFICATION**



DO-214AB (SMC)	SYMBOL	A	B	C	d	T	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	See Note 1			1.55 ± 0.05	0.40 (Max.)	330.00	50.00 (Min.)	13.00 + 0.50 - 0.20
	(inch)	See Note 1			0.061 ± 0.002	0.016 (Max.)	13.000	1.969 (Min.)	0.512 + 0.020 - 0.008

DO-214AB (SMC)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>	W <sub>2</sub>
	(mm)	1.75 ± 0.10	7.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	16.00 ± 0.10	16.40 + 2.00 - 0.00	22.40 (Max.)
	(inch)	0.069 ± 0.004	0.295 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.630 ± 0.004	0.646 + 0.079 - 0.000	0.882 (Max.)

Notes: 1. A, B, and C the clearance between the component and the cavity must be within 0.5 mm max. for 8 mm tape and 12 mm tape, 1.0 mm max. for 16mm tape and 24 mm tape.