

# SM320C THRU SM3100C

VOLTAGE 20V ~ 100V

3.0AMP Surface Mount Schottky Barrier Rectifiers

## FEATURES

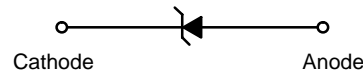
- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.093 grams

DO-214AB

SMC



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	SM320C	SM330C	SM340C	SM350C	SM360C	SM380C	SM390C	SM3100C	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	50	60	80	90	100	V
Maximum RMS Voltage	14	21	28	35	42	56	63	70	V
Maximum DC Blocking Voltage	20	30	40	50	60	80	90	100	V
Maximum Average Forward Rectified Current See Fig. 1	3.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	100								A
Maximum Instantaneous Forward Voltage at 3.0A	0.55		0.75		0.85				V
Maximum DC Reverse Current Ta=25°C	2.0								mA
at Rated DC Blocking Voltage Ta=100°C	20								mA
Typical Junction Capacitance (Note 1)	300								pF
Typical Thermal Resistance R JA (Note 2)	17								°C/W
Operating Temperature Range Tj	-50 — +125								°C
Storage Temperature Range Tstg	-65 — +150								°C

### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (SM320C THRU SM3100C)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

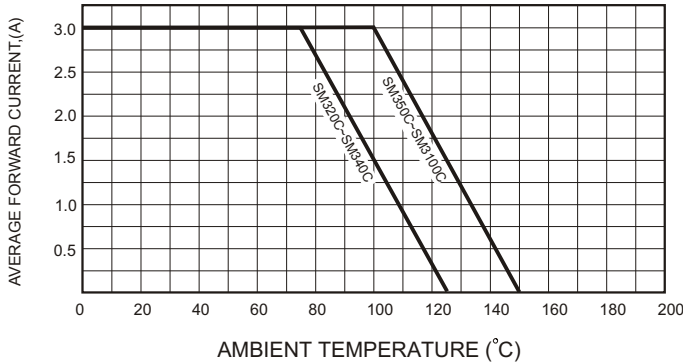


FIG.2-TYPICAL FORWARD

CHARACTERISTICS

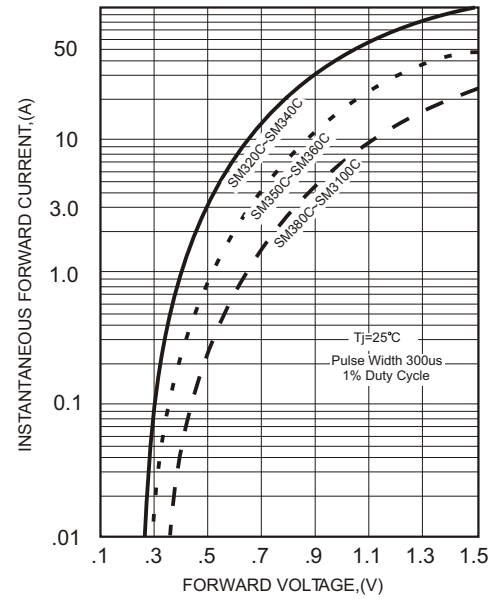


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

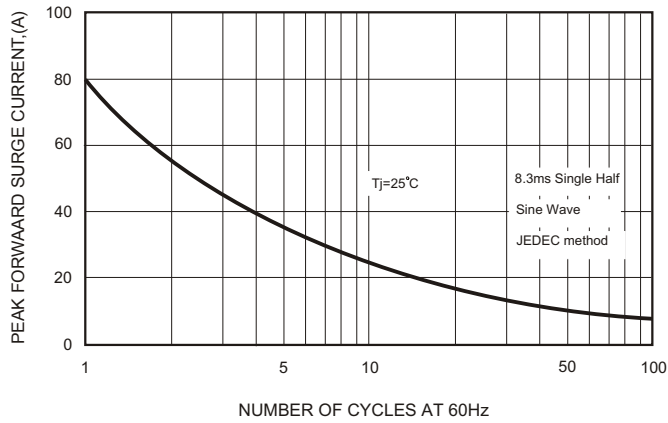


FIG.5 - TYPICAL REVERSE

CHARACTERISTICS

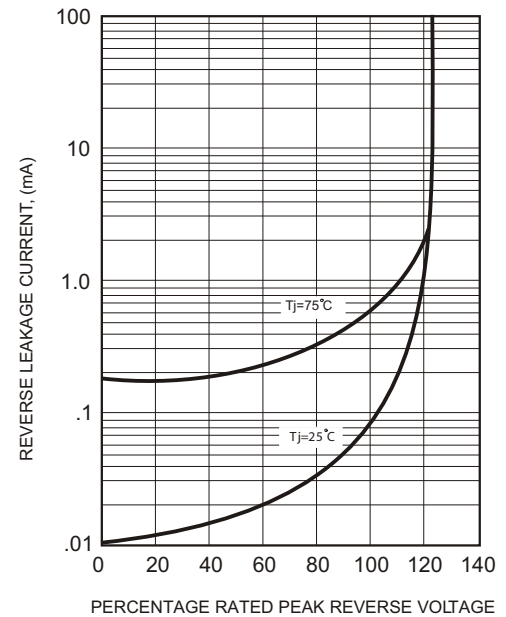
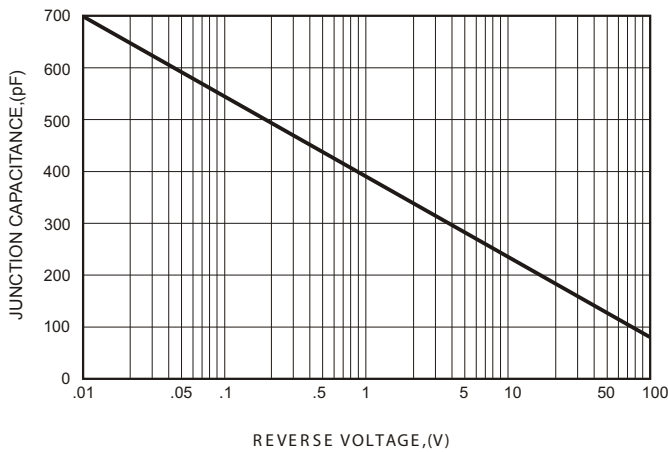
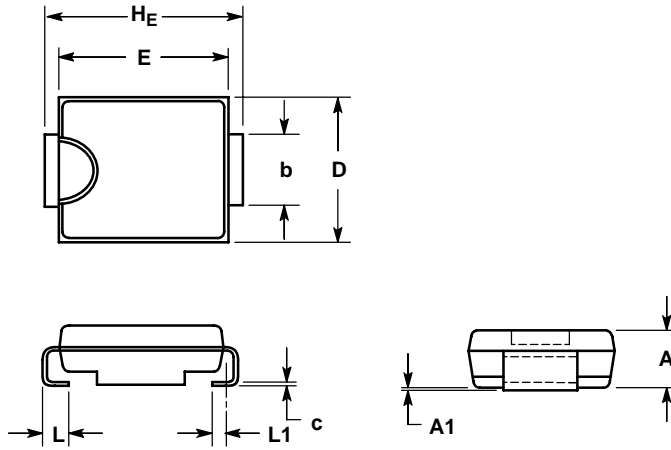


FIG.4-TYPICAL JUNCTION CAPACITANCE



PACKAGE DIMENSIONS

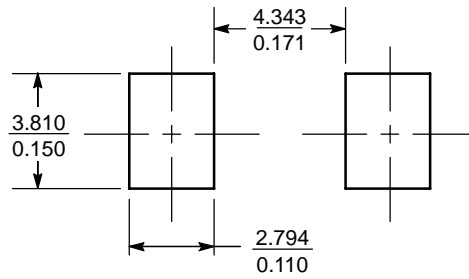
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- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: INCH.
  3. D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P.
  4. 403-01 THRU -02 OBSOLETE, NEW STANDARD 403-03.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.90	2.13	2.41	0.075	0.084	0.095
A1	0.05	0.10	0.15	0.002	0.004	0.006
b	2.92	3.00	3.07	0.115	0.118	0.121
c	0.15	0.23	0.30	0.006	0.009	0.012
D	5.59	5.84	6.10	0.220	0.230	0.240
E	6.60	6.86	7.11	0.260	0.270	0.280
HE	7.75	7.94	8.13	0.305	0.313	0.320
L	0.76	1.02	1.27	0.030	0.040	0.050
L1	0.51 REF			0.020 REF		

SOLDERING FOOTPRINT\*

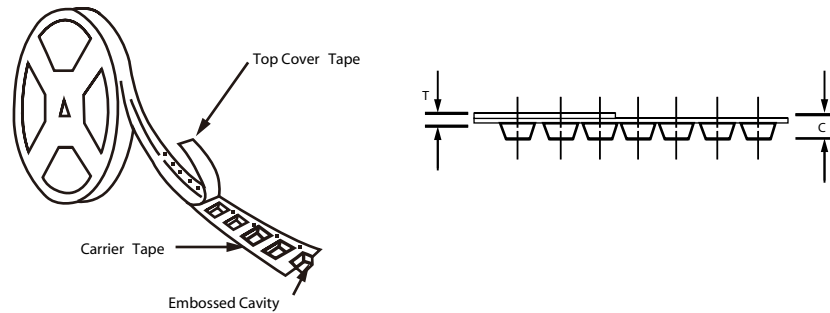
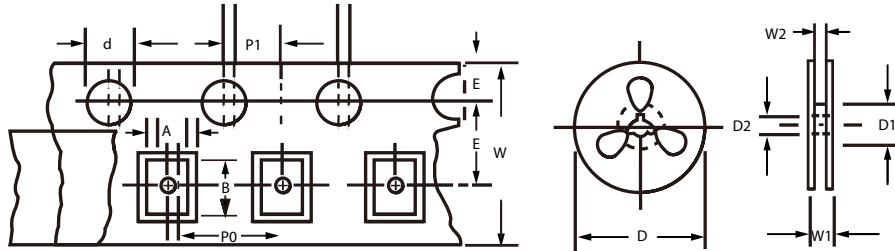


SCALE 4:1 (mm/inches)

## Surface Mount Packaging

Packing

DEVICE TYPE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON / SIZE (mm)	Q'TY / CARTON (PCS)
SMC	3K	330	337x337x50	6K	380x280x380	30K



### Reel Taping Specifications for Surface Mount Devices

Item	Symbol	SMA	SMB	SMC
Carrier width	A	2.7 (max)	4.0 (max)	2.7 (max)
Carrier length	B	5.3 (max)	5.9 (max)	5.3 (max)
Carrier depth	C	2.66 (max)	3.0 (max)	2.66 (max)
Sprocket hole	d	1.50±0.1 DIA	1.50±0.1 DIA	1.50±0.1 DIA
Reel outside diameter	D	330±2	330±2	330±2
Reel inner diameter	D1	50 min	50 min	50 min
Feed hole diameter	D2	13.5±1	13.5±1	13.5±1
Sprocket hole position	E	1.75±0.1	1.75±0.1	1.75±0.1
Punch hole position	F	5.5±0.05	5.5±0.05	7.5±0.1
Sprocket hole pitch	P	4.0±0.1	8.0±0.1	8.0±0.1
Sprocket hole pitch	P0	4.0±0.1	4.0±0.1	4.0±0.1
Embossment center	P1	2.0±0.05	2.0±0.05	2.0±0.05
Overall tape thickness	T	0.6 max	0.6 max	0.6 max
Tape width	W	12.0±0.3	12.0±0.3	16.0±0.3
Reel width	W1	18.4 (max)	18.4 (max)	22.4 (max)
Reed width	W2	14.4 (max)	14.4 (max)	18.4 (max)