

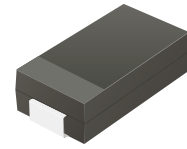
S1A-HF Thru. S1M-HF

Reverse Voltage: 50 to 1000 V

Forward Current: 1.0 A

RoHS Device

Halogen Free

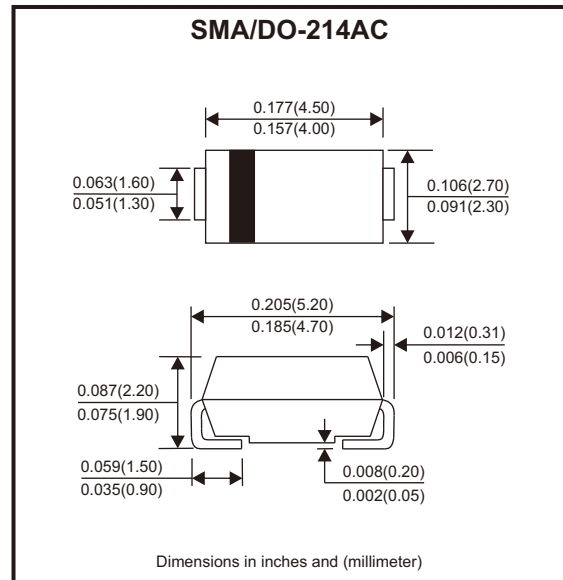


Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0.
- For surface mounted applications.
- Low reverse leakage.
- Built-in strain relief, ideal for automated placement.
- High forward surge current capability.
- High temperature soldering guaranteed : 250°C/10 seconds at terminals.
- Glass passivated chip junction.

Mechanical data

- Case: JEDEC SMA molded plastic body over passivated chip.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.



Circuit Diagram



Maximum Ratings and 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	S1A-HF	S1B-HF	S1D-HF	S1G-HF	S1J-HF	S1K-HF	S1M-HF	Units
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
DC blocking voltage	V_R	50	100	200	400	600	800	1000	V
RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0							A
Average forward current	$I_{F(AV)}$	1.0							A
Forward voltage at 1.0A	V_F	1.1							V
Max. DC reverse current at rated DC blocking voltage	I_R	5 50							μA
Typical thermal resistance (Note 1)	$R_{\theta JA}$	75							°C/W
Typical junction capacitance (Note 2)	C_J	15							pF
Typical reverse recovery time (Note 3)	t_{rr}	2.0							μs
Operating temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Notes: 1. P.C.B mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas.
2. Measured at 1MHz and applied reverse voltage of 4V D.C.
3. Measured with $I_F=0.5A$, $I_R=1A$, $t_{rr}=0.25A$.

Rating and Characteristic Curves (S1A-HF Thru. S1M-HF)

Fig.1 - Forward Current Derating Curve

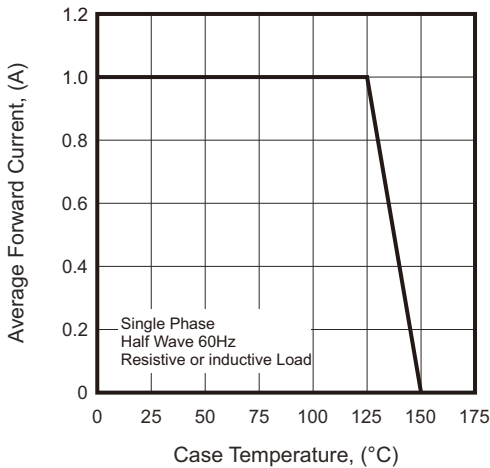


Fig.2 - Max. Non-Repetitive Peak Forward Surge Current

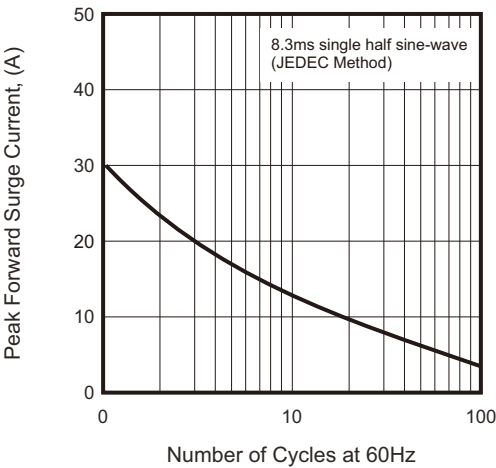


Fig.3 - Typical Instantaneous Forward Characteristics

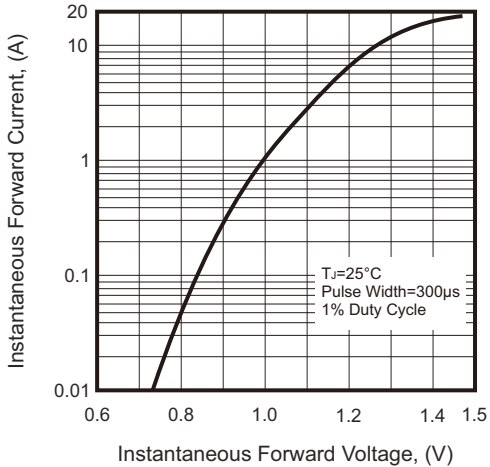
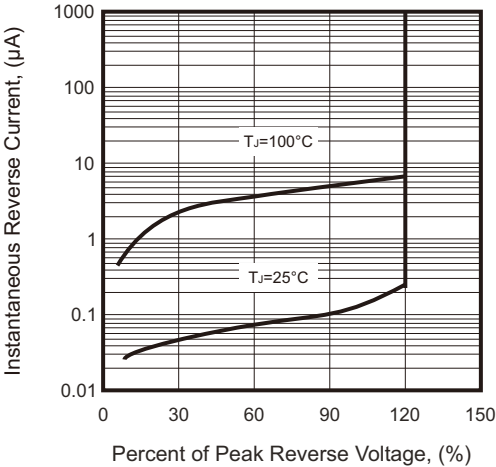
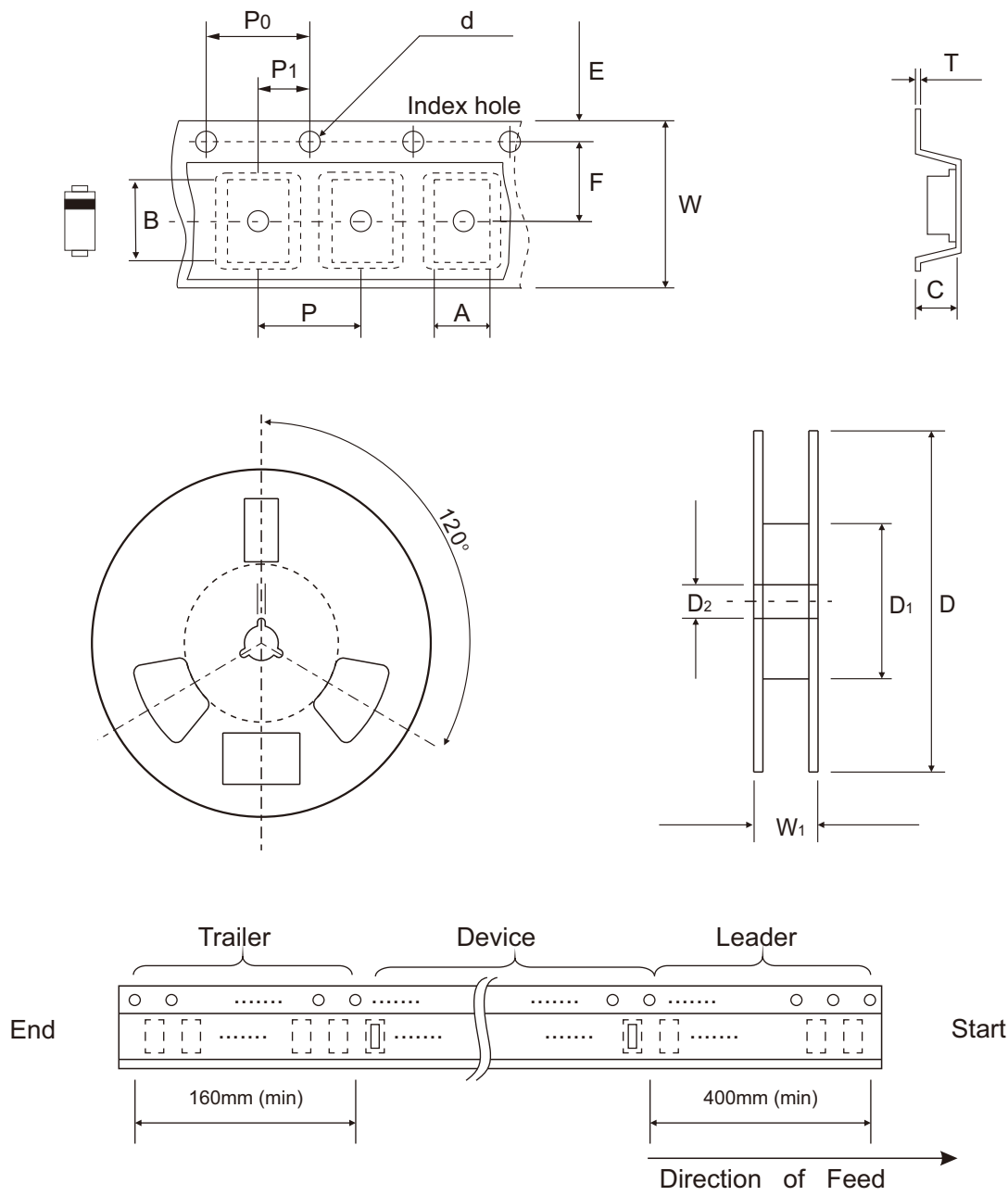


Fig.4 - Typical Reverse Characteristics



Reel Taping Specification

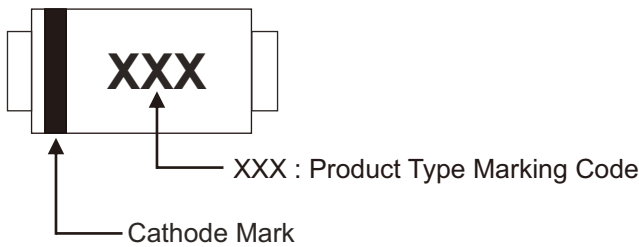


DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.80 ± 0.10	5.33 ± 0.10	2.36 ± 0.10	1.55 ± 0.10	330 ± 2.00	50 MIN.	13.50 ± 2.00
	(inch)	0.110 ± 0.004	0.210 ± 0.004	0.093 ± 0.004	0.061 ± 0.004	12.992 ± 0.079	1.969 MIN.	0.531 ± 0.079

DO-214AC (SMA)	SYMBOL	E	F	P	P0	P1	W	W1	T
	(mm)	1.75 ± 0.10	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	12.00 ± 0.10	18.40 MAX.	0.25 ± 0.10
	(inch)	0.069 ± 0.004	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.472 ± 0.004	0.724 MAX.	0.010 ± 0.004

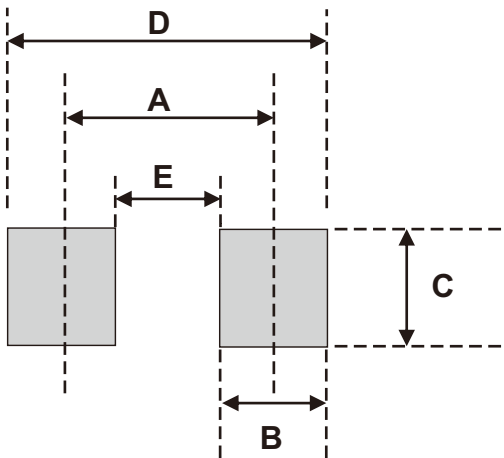
Marking Code

Part Number	Marking code
S1A-HF	S1A
S1B-HF	S1B
S1D-HF	S1D
S1G-HF	S1G
S1J-HF	S1J
S1K-HF	S1K
S1M-HF	S1M



Suggested P.C.B. PAD Layout

SIZE	DO-214AC (SMA)	
	(mm)	(inch)
A	4.00	0.157
B	2.50	0.100
C	1.80	0.071
D	6.50	0.256
E	1.50	0.060



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AC (SMA)	5,000	13