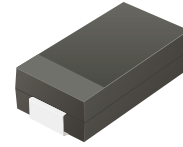


US1Y-HF

RoHS Device
Halogen Free



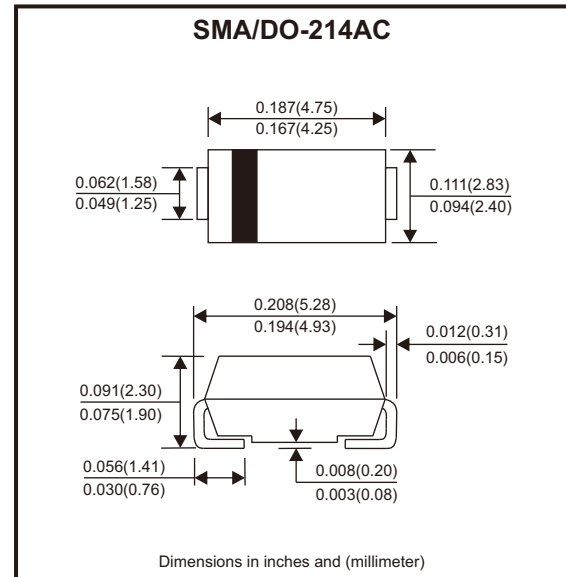
Features

- Low profile package.
- Ideal for automated placement.
- Glass passivated chip junction.
- High frequency.
- High forward surge capability.

Mechanical data

- Case: SMA/DO-214AC, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Polarity: Color band denotes cathode end.

Circuit Diagram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbols	Value	Units
Maximum repetitive peak reverse voltage	V_{RRM}	1200	V
Maximum RMS voltage	V_{RMS}	840	V
Maximum DC blocking voltage	V_{DC}	1200	V
Average forward current @Half-sine wave, resistance load	I_o	1	A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load	I_{FSM}	30	A
Peak forward voltage at $I_F = 1A$	V_F	1.65	V
Peak reverse current $V_R = V_{RRM}$ @ $T_a = 25^\circ C$ $V_R = V_{RRM}$ @ $T_a = 125^\circ C$	I_R	5 1000	μA
Reverse recovery time @ $I_F = 0.5A$, $I_R = 1A$, $I_{rr} = 0.25A$	t_{rr}	75	nS
Typical junction capacitance @ $V_R = 4V$, $f = 1MHz$	C_J	18	pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	75 27	$^\circ C/W$
Operating junction temperature range	T_J	-55 to +175	$^\circ C$
Storage temperature range	T_{STG}	-55 to +175	$^\circ C$

Notes: 1. Units mounted on PCB with 0.2" x 0.2" (5mm x 5mm) copper pad areas.

Typical Rating and Characteristic Curves (US1Y-HF)

Fig.1 - Maximum Forward Current Derating Curve

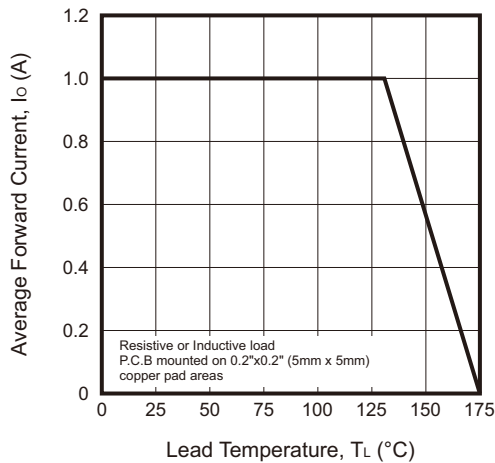


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

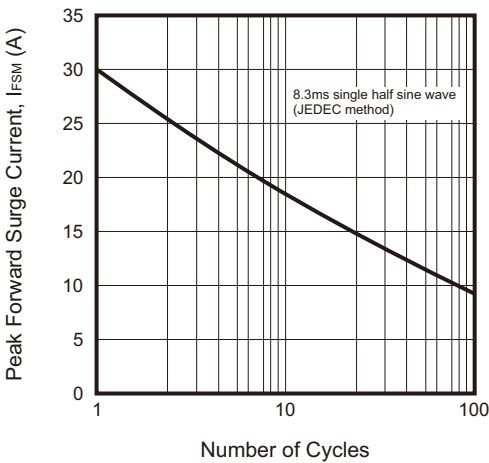


Fig.3 - Typical Instantaneous Forward Characteristic

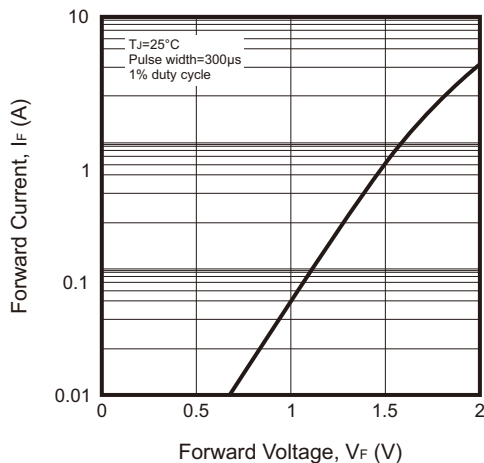
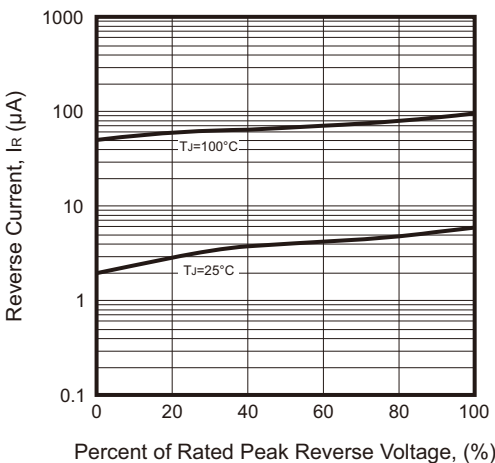
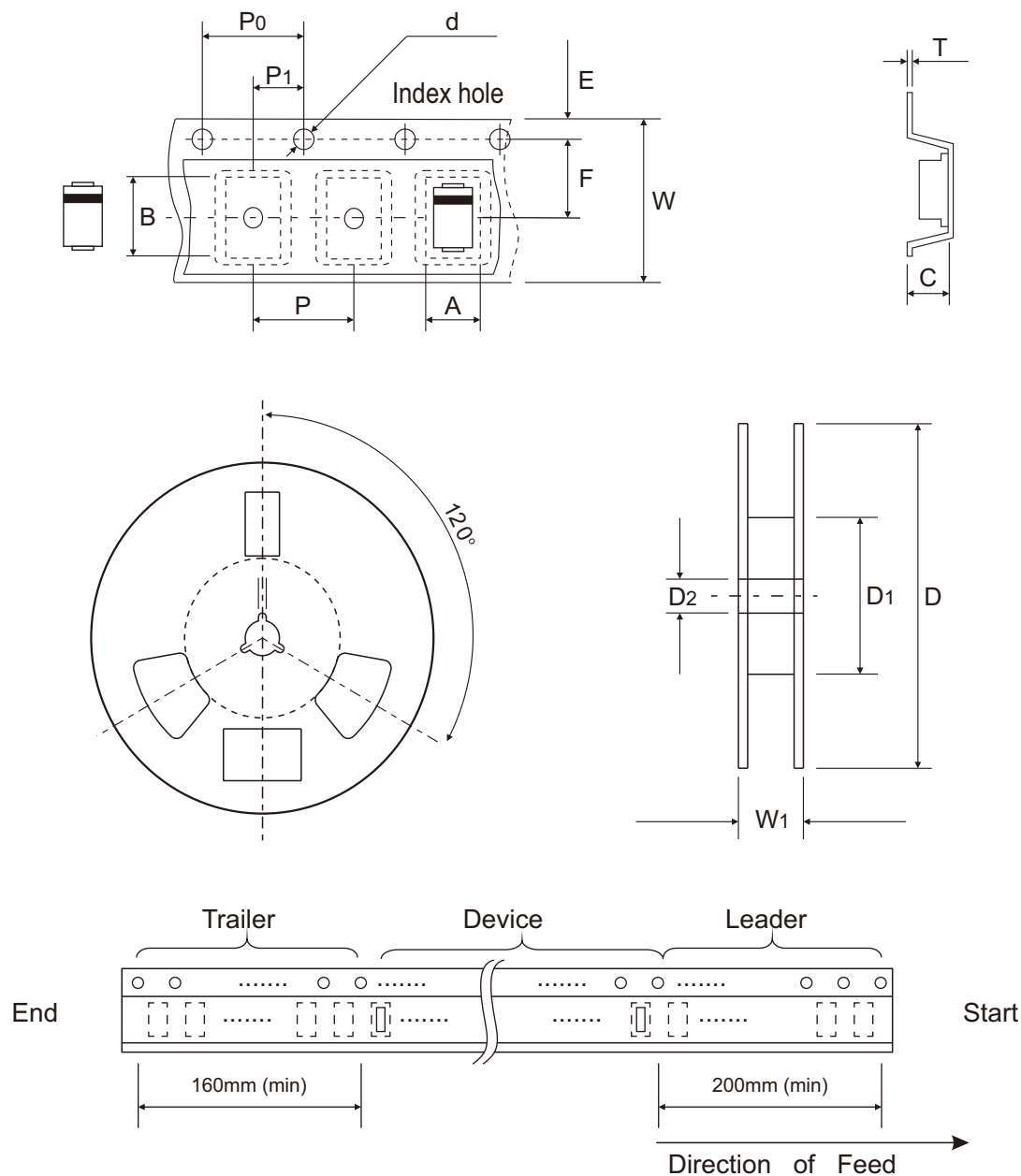


Fig.4 - Typical Reverse Leakage Characteristics



Reel Taping Specification



DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.20 ± 0.10	5.80 ± 0.10	2.36 ± 0.10	1.55 ± 0.05	330.00 ± 2.00	100.00 ± 1.00	13.00 ± 0.20
	(inch)	0.126 ± 0.004	0.228 ± 0.004	0.093 ± 0.004	0.061 ± 0.002	12.992 ± 0.079	3.937 ± 0.039	0.512 ± 0.008

DO-214AC (SMA)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.05	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	12.00 ± 0.15	17.50 ± 1.00
	(inch)	0.069 ± 0.002	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.472 ± 0.006	0.689 ± 0.039

Marking Code

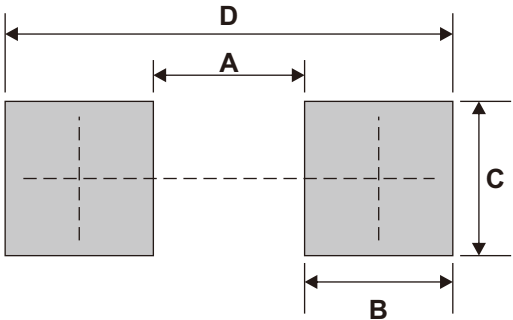
Part Number	Marking Code
US1Y-HF	HS1Y



 = Cathode band

Suggested P.C.B. PAD Layout

SIZE	SMA/DO-214AC	
	(mm)	(inch)
A	1.66	0.065
B	1.96	0.077
C	2.04	0.080
D	5.58	0.220



Standard Packaging

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