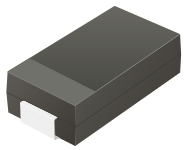
US8AC-HF Thru. US8MC-HF

Reverse Voltage: 50 to 1000 Volts
Forward Current: 8 Amp
RoHS Device
Halogen Free



Features

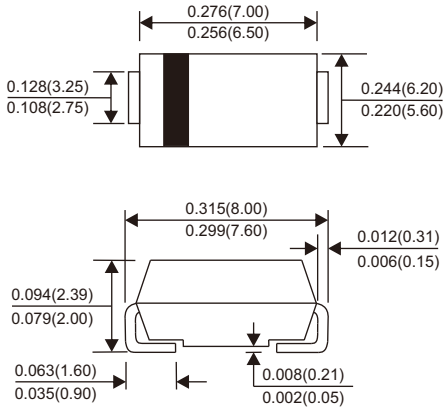
- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.

Mechanical data

- Case: SMC
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram

SMC/DO-214AB



Dimensions in inches and (millimeter)

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	US8AC -HF	US8BC -HF	US8DC -HF	US8GC -HF	US8JC -HF	US8KC -HF	US8MC -HF	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 Tc =100°C	$I_{F(AV)}$	8							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150							A
Max. instantaneous forward voltage at 8A	V_F	1.0			1.3	1.7			V
Maximum DC reverse current T_a = 25°C at rated DC reverse voltage T_a =125°C	I_R	10 100							μA
Typical junction capacitance at V_R = 4V, f = 1MHz	C_j	65				55			pF
Maximum reverse recovery time (Note 1)	t_{rr}	50				80			ns
Typical thermal resistance (Note 2)	$R_{\theta JA}$	35							°C/W
Operating and storage temperature range	T_j, T_{stg}	-55 ~ +150							°C

Notes: 1. Measured with I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A.
2. P.C.B. mounted with 2.0" x 2.0" (5 x 5 cm) copper pad areas.

Rating and Characteristic Curves (US8AC-HF Thru. US8MC-HF)

Fig.1 - Max. Average Forward Current Rating

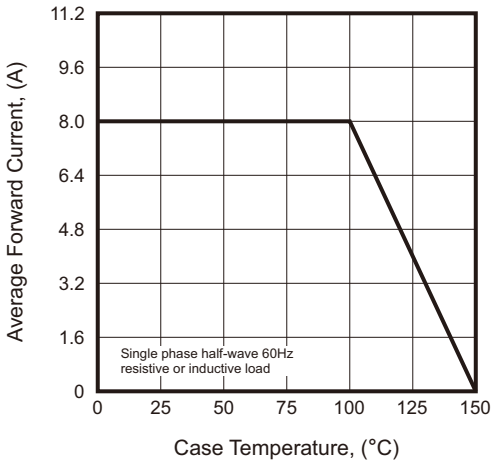


Fig.2 - Typical Reverse Characteristics

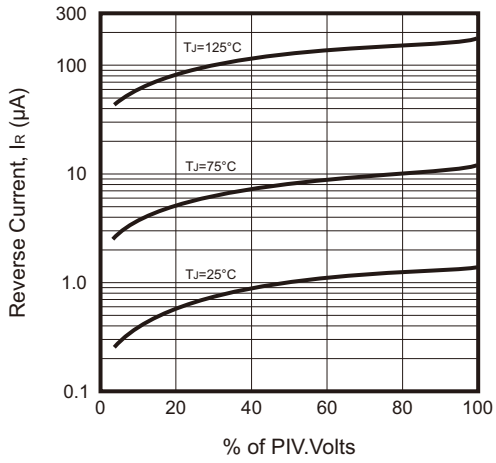


Fig.3 - Typical Forward Characteristic

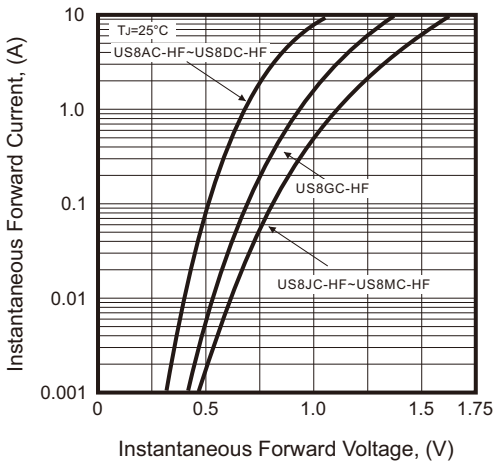


Fig.4 - Typical Junction Capacitance

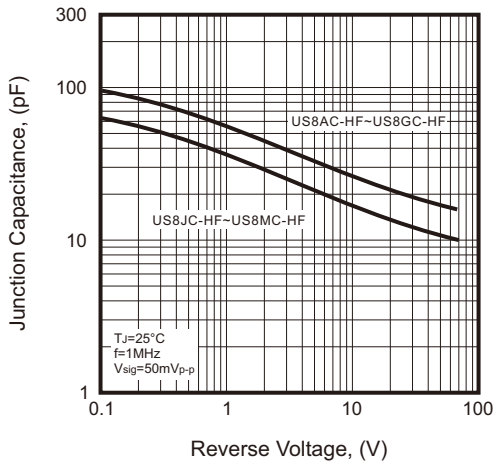
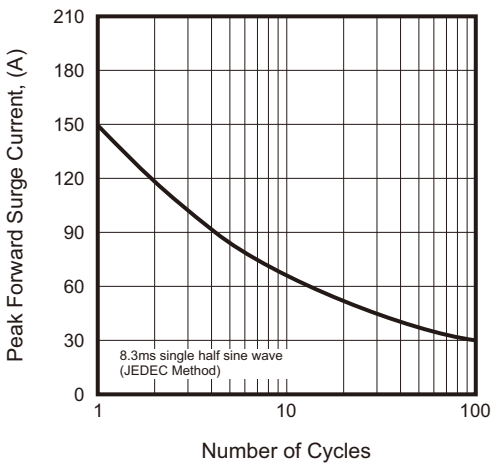
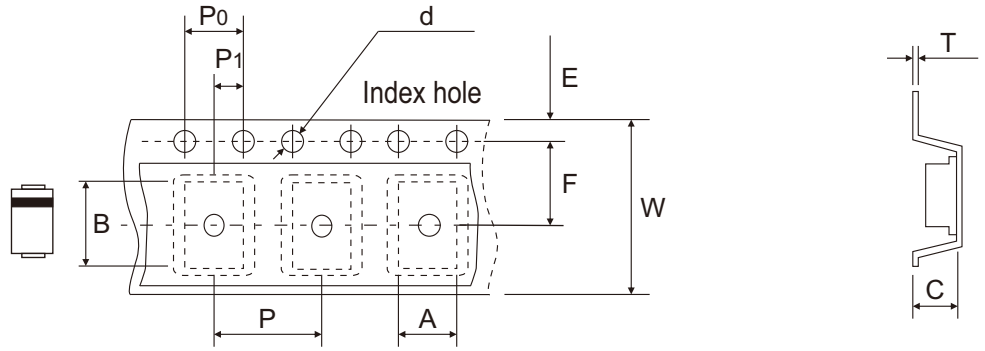
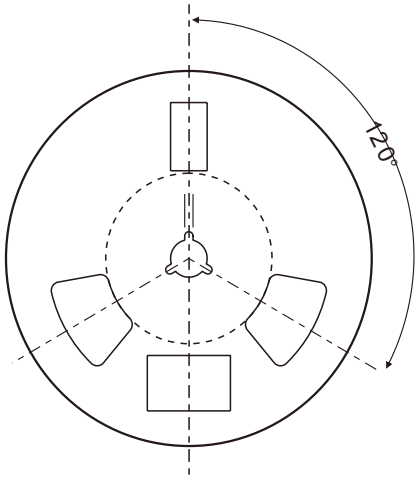


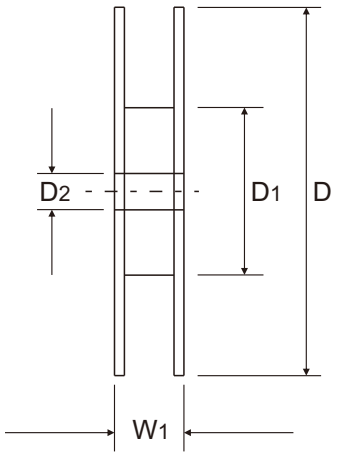
Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

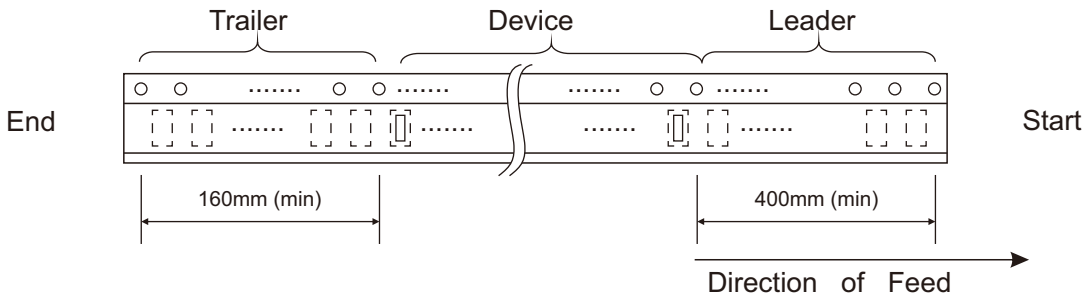


Reel Taping Specification







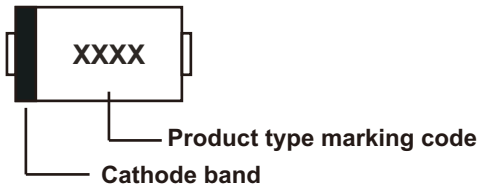


	SYMBOL	A	B	C	d	D	D1	D2
DO-214AB (SMC)	(mm)	6.22 ± 0.10	8.31 ± 0.10	2.49 ± 0.10	1.55 ± 0.05	330 ± 2.00	100.00 ± 1.00	13.00 ± 0.20
	(inch)	0.245 ± 0.004	0.327 ± 0.004	0.098 ± 0.004	0.061 ± 0.002	12.992 ± 0.079	3.937 ± 0.039	0.512 ± 0.008

	SYMBOL	E	F	P	P0	P1	T	W	W1
DO-214AB (SMC)	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.28 ± 0.02	16.00 ± 0.30	21.00 + 2.00 − 1.00
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.011 ± 0.001	0.630 ± 0.012	0.827 + 0.079 − 0.039

Marking Code

Part Number	Marking Code
US8AC-HF	US8A
US8BC-HF	US8B
US8DC-HF	US8D
US8GC-HF	US8G
US8JC-HF	US8J
US8KC-HF	US8K
US8MC-HF	US8M

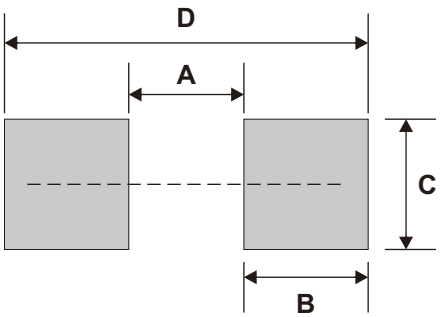


xxxx = Product type marking code

Suggested PAD Layout

SIZE	DO-214AB (SMC)	
	(mm)	(inch)
A	3.80	0.150
B	4.10	0.161
C	4.30	0.169
D	12.00	0.472

Note: 1. The pad layout is for reference purpose only.



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AB (SMC)	3,000	13