

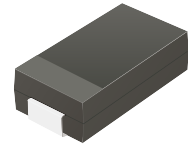
ACFRA101-HF Thru. ACFRA107-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

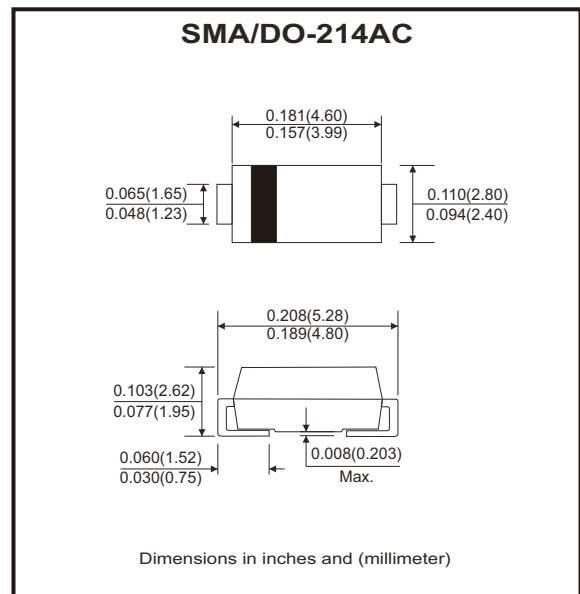


Features

- Fast switching for high efficiency.
- Low power loss, high efficiency.
- High current capability.
- For use in low voltage application.
- AEC-Q101 Qualified.

Mechanical data

- Epoxy: UL 94V-0 rate flame retardant.
- Case: SMA/DO-214AC, molded plastic.
- Terminals: Plated leads solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.



Circuit Diagram



Maximum Rating and Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Symbol	ACFRA 101-HF	ACFRA 102-HF	ACFRA 103-HF	ACFRA 104-HF	ACFRA 105-HF	ACFRA 106-HF	ACFRA 107-HF	Unit
Max. repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Max. RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Max. DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Max. average forward rectified current	I _F	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30							A
Max. Instantaneous forward voltage I _F = 1A	V _F	1.3							V
Max. DC reverse current @ T _C =25°C at rated DC blocking voltage @ T _C =100°C	I _R	5 150							μA
Max. reverse recovery time (Note 1)	T _{rr}	150			250	500			nS
Typical junction capacitance (Note 2)	C _j	12							pF
Typical thermal resistance (Note 3)	R _{θJA}	100							°C/W
	R _{θJL}	32							
Operating and storage temperature range	T _J , T _{STG}	-55 to +150							°C

Notes: 1. Reverse recovery test conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C
 3. 8.0mm² (.013mm thick) land areas.

Rating and Characteristic Curves (ACFRA101-HF Thru. ACFRA107-HF)

Fig.1 - Max. Average Forward Current Derating

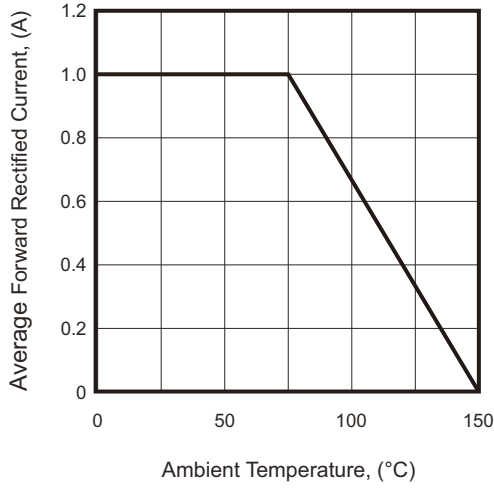


Fig.2 - Typical Forward Characteristics

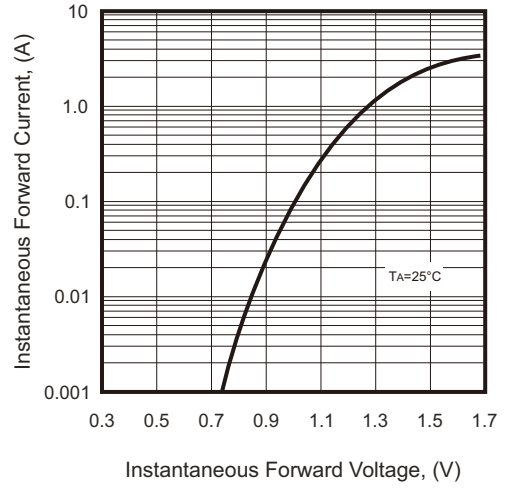


Fig.3 - Max. Non-Repetitive Surge Current

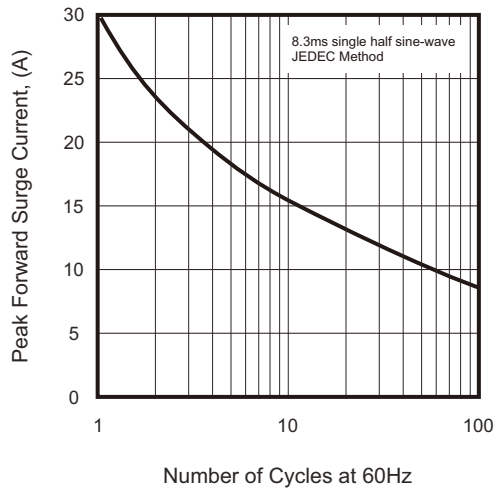


Fig.4 - Typical Junction Capacitance

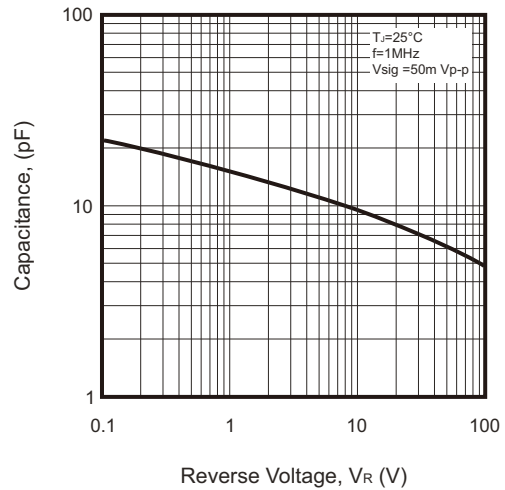
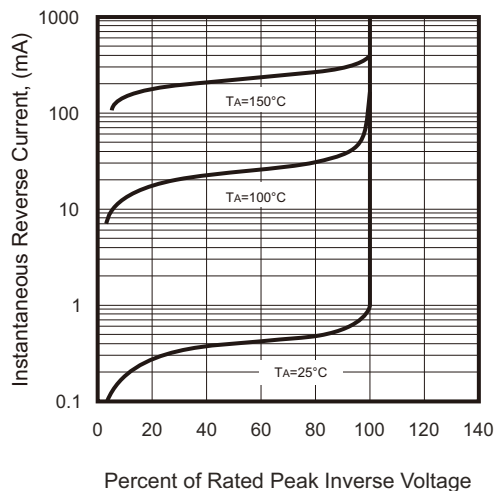
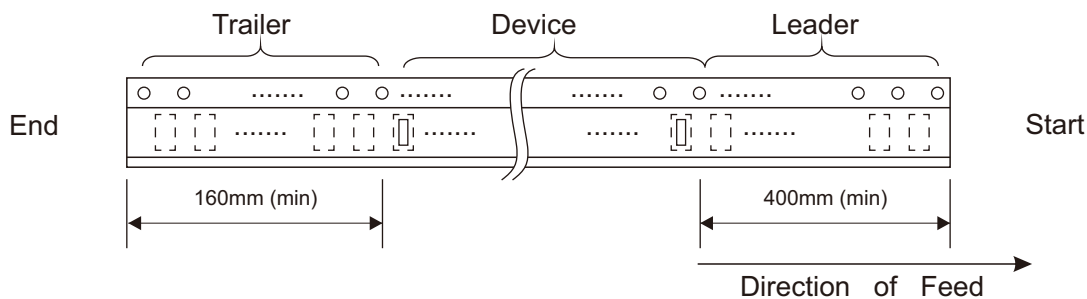
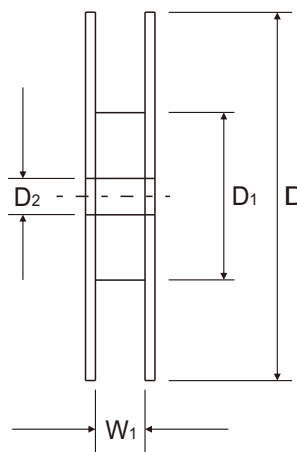
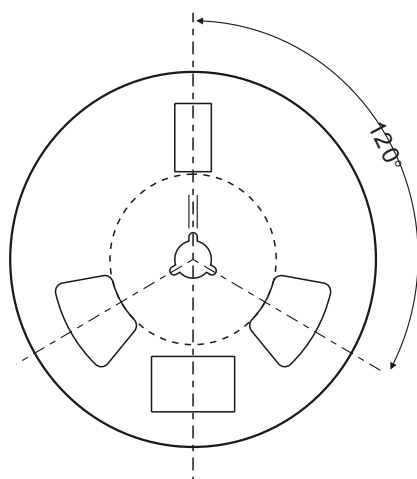
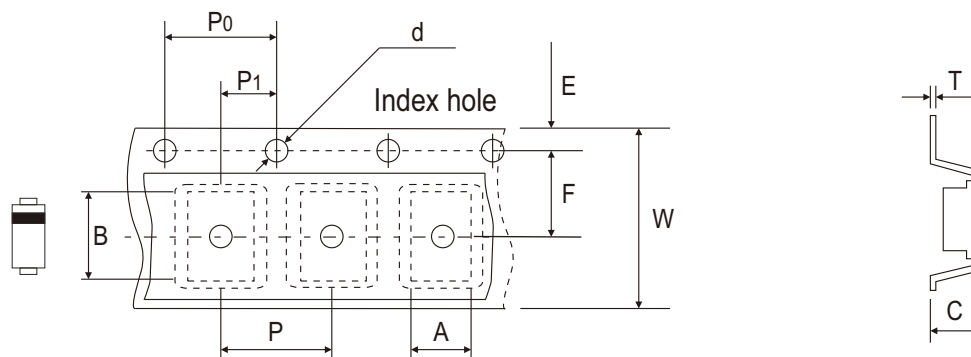


Fig.5 - Typical Reverse Characteristics



Reel Taping Specification

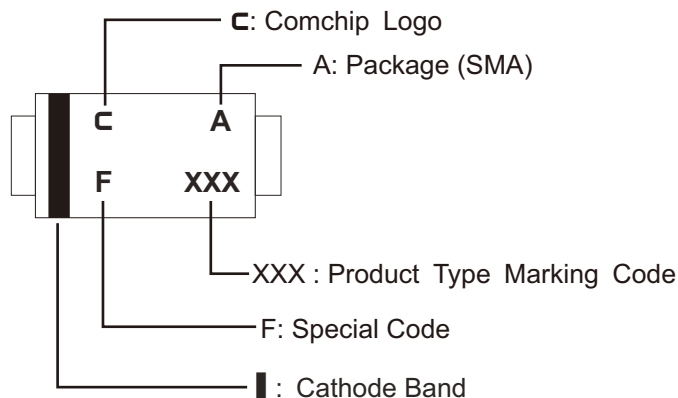


DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	2.79 ± 0.10	5.33 ± 0.10	2.36 ± 0.05	1.50 ± 0.10	330 ± 1.00	75 ± 1.00	13.50 + 1.00 - 0.50
	(inch)	0.110 ± 0.004	0.210 ± 0.004	0.093 ± 0.002	0.059 ± 0.004	12.992 ± 0.039	2.953 ± 0.039	0.531 + 0.039 - 0.020

DO-214AC (SMA)	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.05	12.00 ± 0.15	17.00 ± 1.00
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.002	0.472 ± 0.006	0.669 ± 0.039

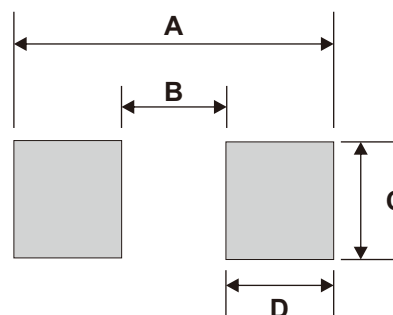
Marking Code

Part Number	Marking Code
ACFRA101-HF	101
ACFRA102-HF	102
ACFRA103-HF	103
ACFRA104-HF	104
ACFRA105-HF	105
ACFRA106-HF	106
ACFRA107-HF	107



Suggested PAD Layout

SIZE	DO-214AC(SMA)	
	(mm)	(inch)
A	5.58	0.220
B	2.10	0.083
C	1.27	0.050
D	1.27	0.050



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

Standard Packaging

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