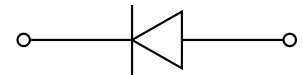


DO-214AC(SMA)



Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication

Mechanical Data

- Case: DO-214AC(SMA)
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	US1A	US1B	US1D	US1G	US1J	US1K	US1M
Maximum repetitive peak reverse voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	1.0						
Forward Surge Current (Nonrepetitive) @60Hz Half-sine wave, 1 cycle, T=25°C	I_{FSM}	A	30.0						
Storage temperature	T_{stg}	°C	-55 ~+150						
Junction temperature	T_j	°C	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	°C /W	80						
	$R_{\theta J-L}^{(1)}$	°C /W	30						

Note : (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0mm x 5.0 mm) copper pad areas

Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	US1A	US1B	US1D	US1G	US1J	US1K	US1M
Maximum instantaneous forward voltage	$I_f=1.0A$	V_F	V	1.0			1.4	1.7		
Maximum reverse recovery time	$I_f=0.5A, I_R=1.0A, I_{rr}=0.25A$	T_{rr}	ns	50					75	
Maximum DC reverse current at rated DC blocking voltage	$V_{RM}=V_{RRM}$	I_R	μA	2.0						
				200						
Typical junction capacitance	4.0V DC, 1MHz	C_j	pF	20						

► **Ratings And Characteristics Curves** ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

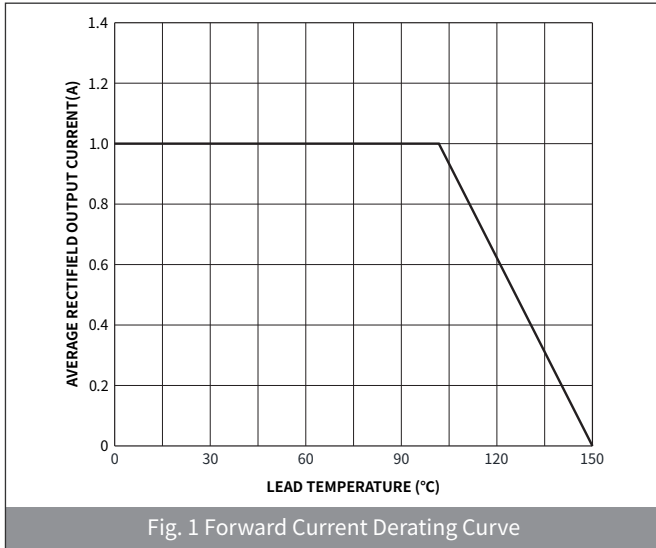


Fig. 1 Forward Current Derating Curve

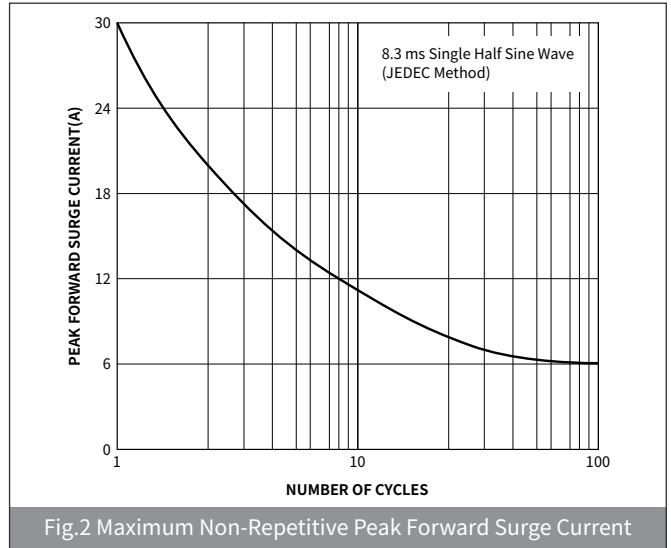


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

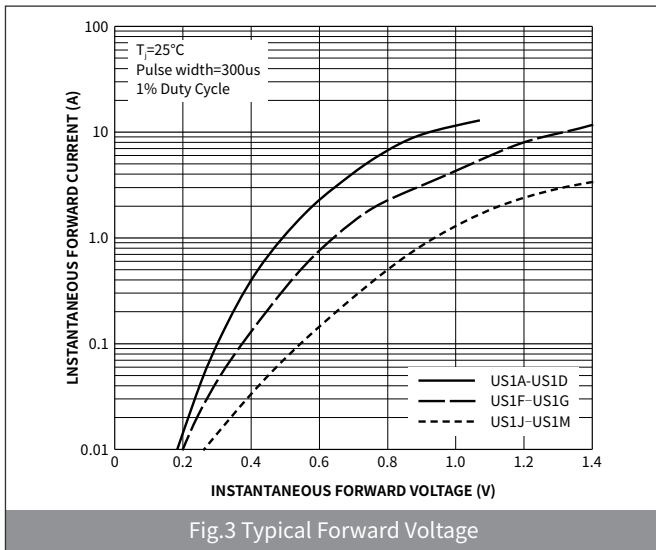


Fig.3 Typical Forward Voltage

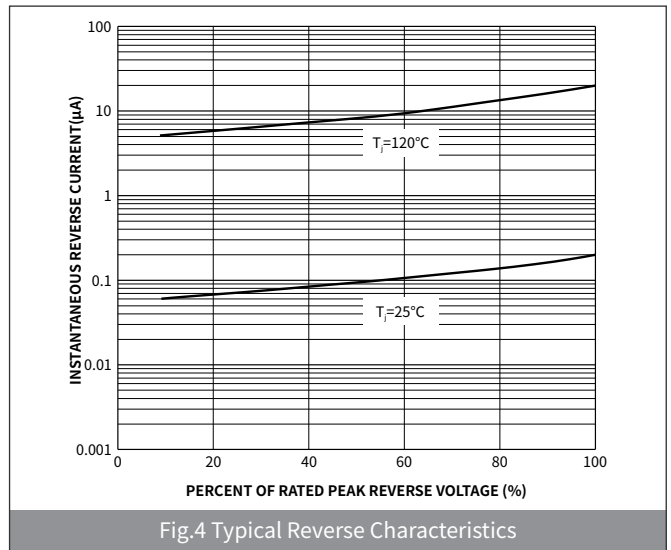


Fig.4 Typical Reverse Characteristics

▶ Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMA	R2	0.07	5000	10000	80000	11"
SMA	R3	0.07	7500	15000	120000	13"

▶ Package Outline Dimensions (SMA/DO-214AC)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.65	0.156	0.183
C	2.35	2.85	0.093	0.112
D	1.98	2.41	0.078	0.095
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	4.70	5.30	0.185	0.209
H	0.15	0.31	0.006	0.012

▶ Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	1.70	-	0.067	-
J	2.10	-	0.082	-
K	-	2.30	-	0.090