

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

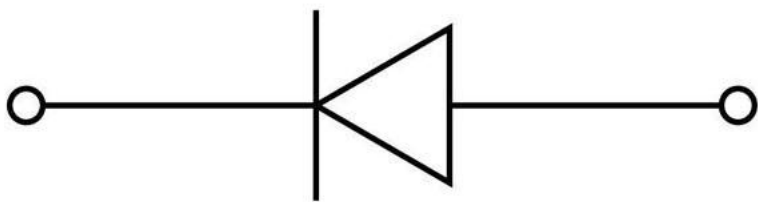
Applications

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

Function Diagram



SMA Surface Mount High Efficient Rectifier

US1A THRU US1M

Reverse Voltage

50-1000 V

Forward Current

1 Ampere



SMA (DO-214AC)

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

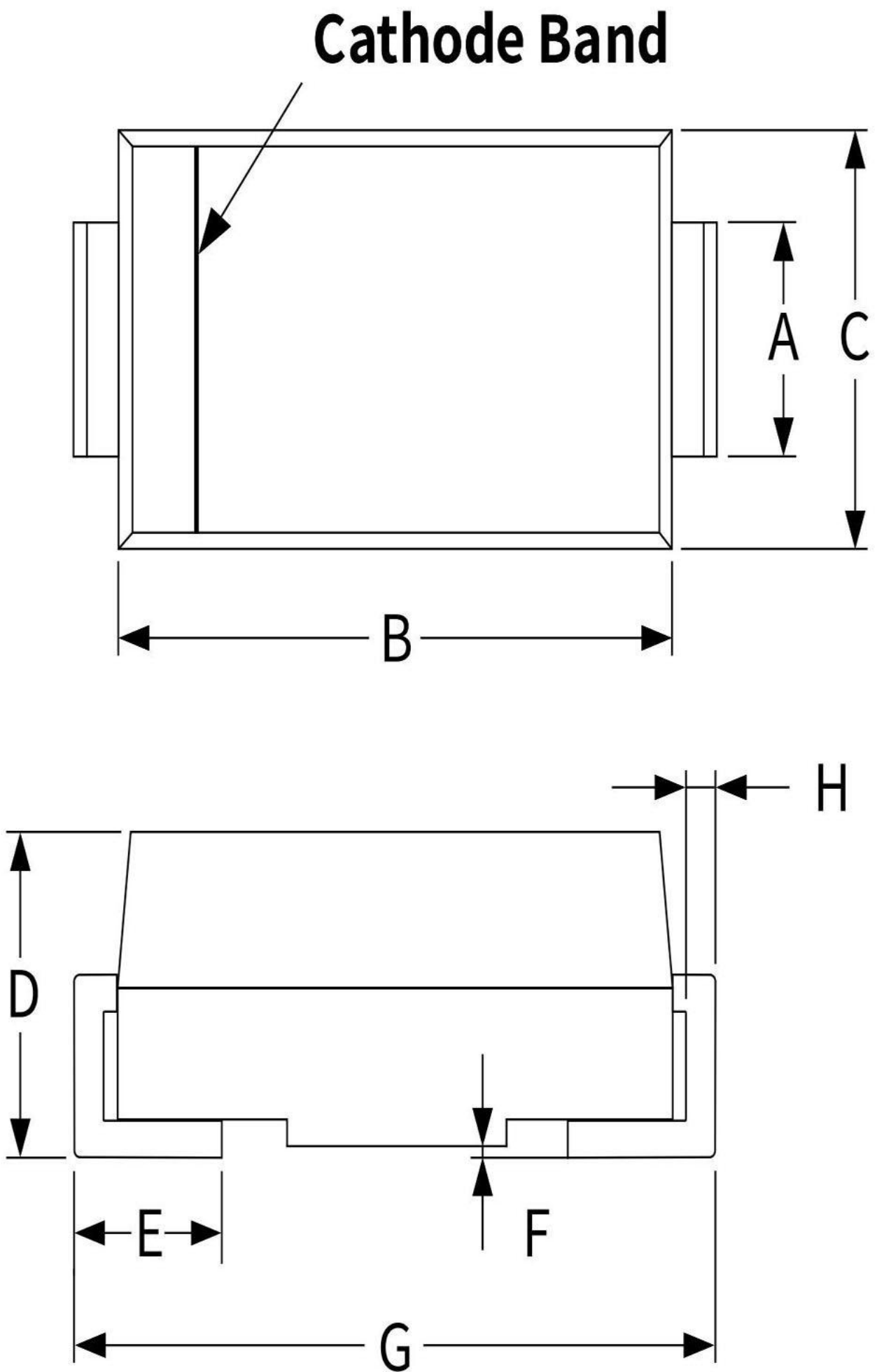
PARAMETER	SYMBOL	UNIT	US1A	US1B	US1D	US1G	US1J	US1K	US1M
Device marking code			US1A	US1B	US1D	US1G	US1J	US1K	US1M
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	1.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	30.0						
Storage temperature	T_{stg}	°C	-55 ~+150						
Junction temperature	T_j	°C	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	80						
	$R_{\theta J-L}$	°C /W	30						

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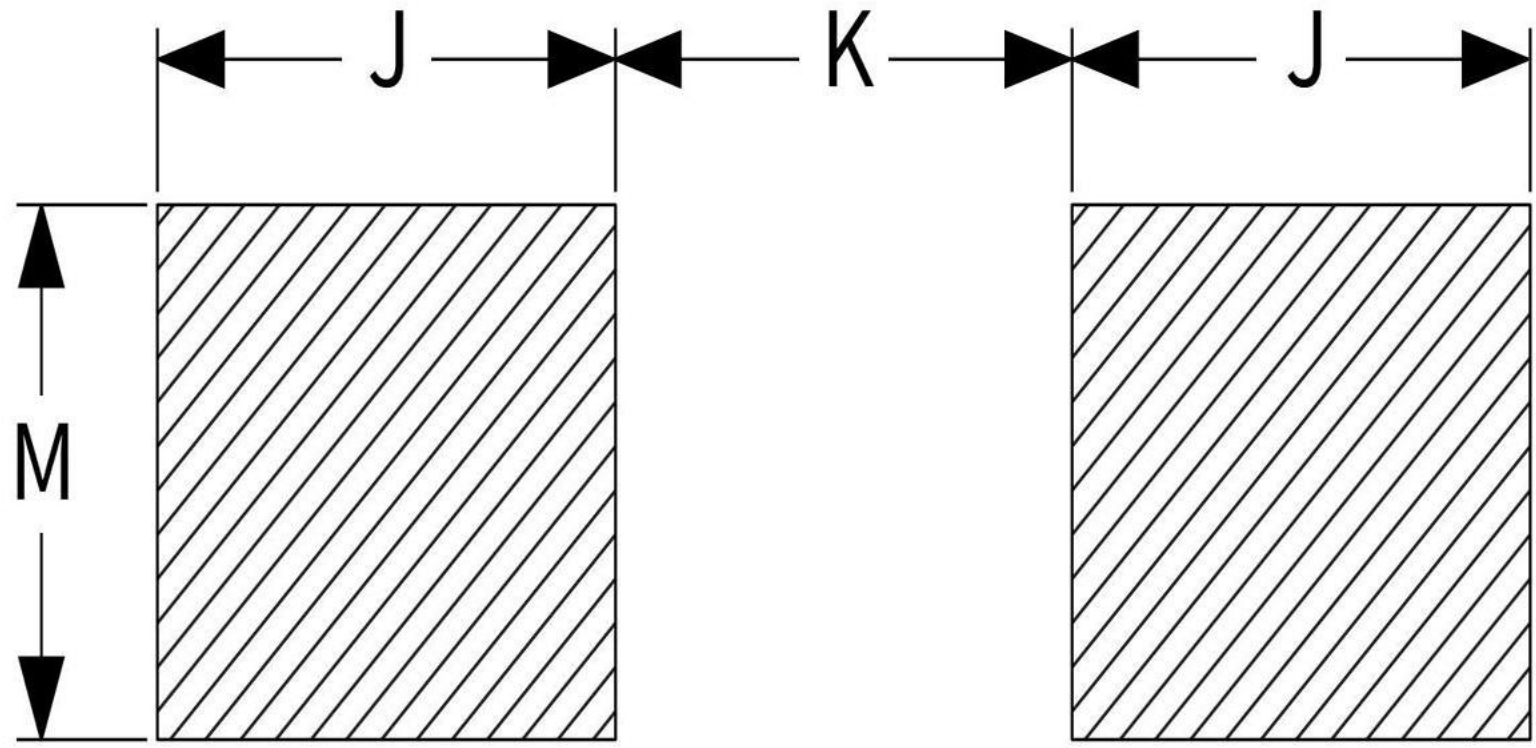
Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMA	R2	0.07	5000	10000	50000	13"
SMA	R3	0.07	7500	15000	75000	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

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

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		
Maxinum reverse recovery time	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A	T _{rr}	ns	50				75		
Maximum DC reverse currentat rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	μA	5.0						
	V _R =V _{DC} , T _A =100°C	I _{R2}		500						
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	20						

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

