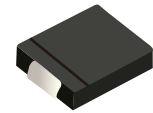


FEATURES

- | Glass passivated junction chip
- | Low reverse leakage
- | High forward surge current capability
- | Meet AEC-Q101 Requirements



DO-214AB(SMC)



Schematic Symbol

MECHANICAL DATA

- | Case : Molded plastic body
- | Polarity : Polarity symbol marking on body
- | Mounting Position : Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter		Symbol	US 10ACQ	US 10BCQ	US 10DCQ	US 10GCQ	US 10JCQ	US 10KCQ	US 10MCQ	Unit
Marking			US10A	US10B	US10D	US10G	US10J	US10K	US10M	
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	
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	
Maximum average forward rectified current at T _L =100°C		I _{F(AV)}	10.0							A
Surge peak forward current,8.3ms single half sine-wave superimposed on rated load per diode		I _{FSM}	200.0							
Maximum instantaneous forward voltage at 10.0A		V _F	1.0			1.4	1.7			V
Maximum reverse current @rated V _R	T _J =25°C	I _R	2.0							μA
	T _J =125°C		200							
Maximun reverse recovery time(Note 1)		T _{rr}	50				75			ns
Typical junction capacitance (Note2)		C _J	89.0							pF
Typical thermal resistance		R _{θJ-A}	47.0							°C/W
Operating junction and storage temperature range		T _J ,T _{STG}	-55 to +150							°C

Note 1: Reverse recovery time test condition: IF=0.5A IR=1.0A Irr=0.25A

2: Measured at 1MHz and applied reverse voltage of 4.0V D.C

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

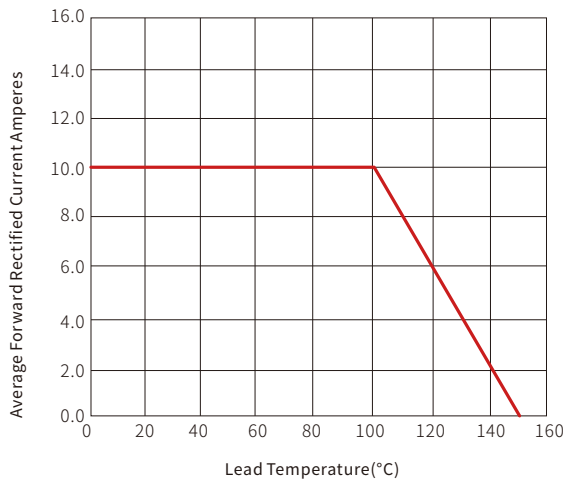


Fig. 2-Maximum Non-Repetitive Peak Forward Surge Current Perleg

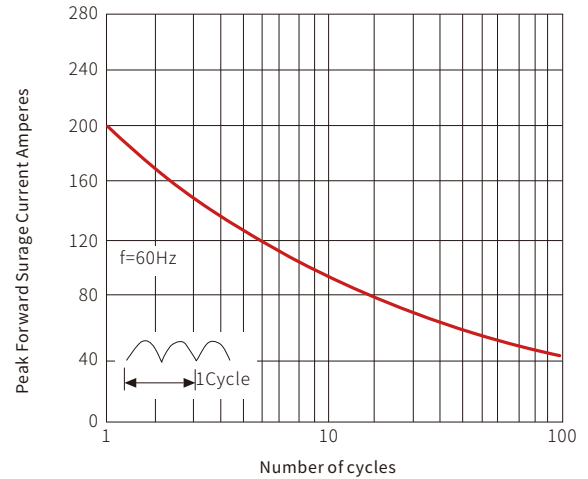


Fig. 3-Typical Forward Voltage Characteristics

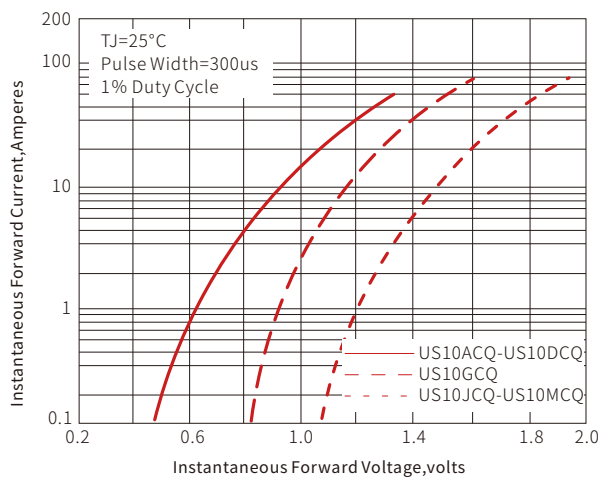
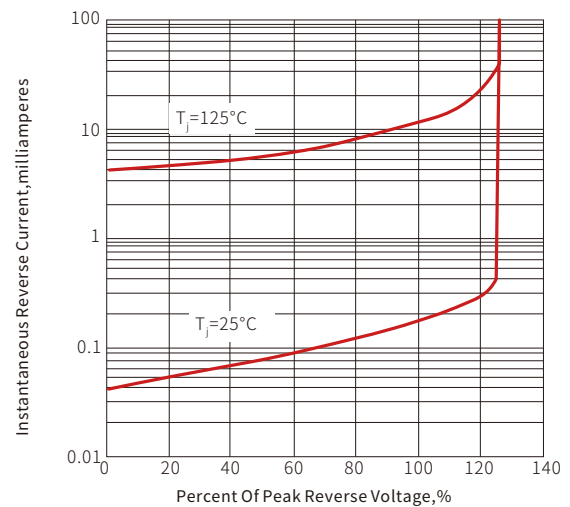
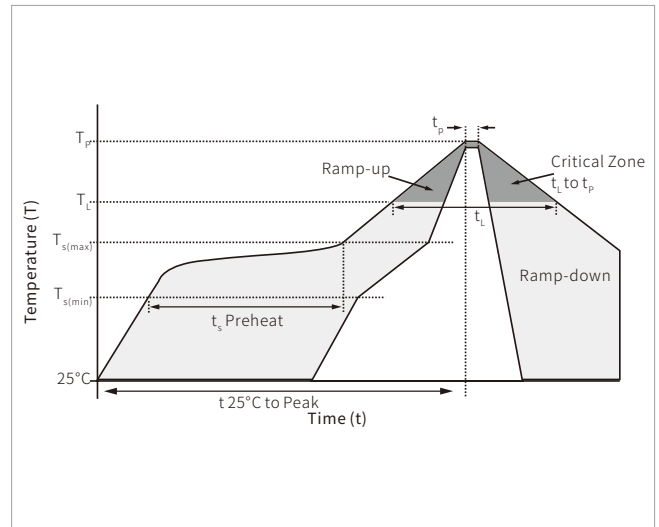


Fig. 4-Typical Reverse Leakage Characteristics

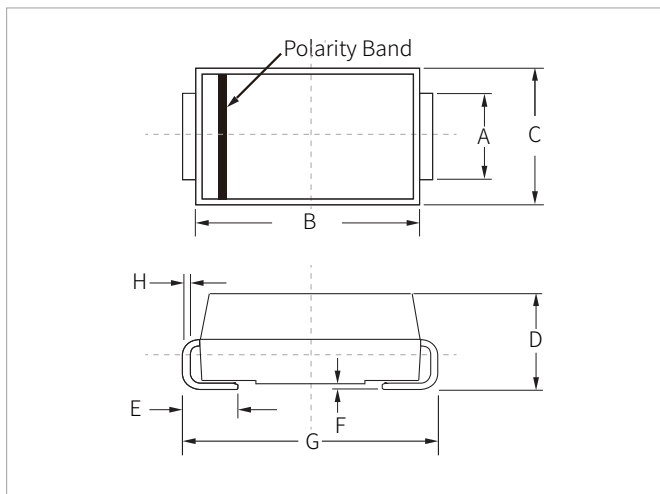


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

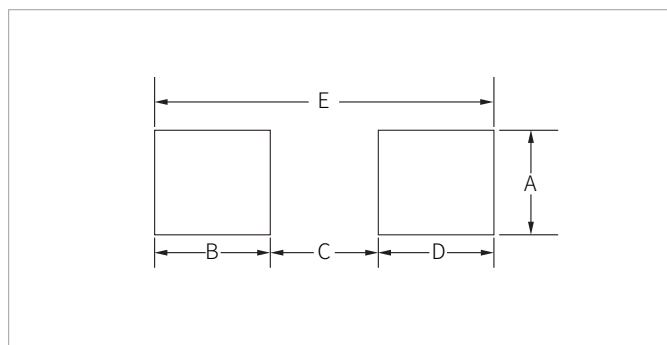


DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.60	7.20	0.260	0.283
C	5.70	6.10	0.224	0.240
D	2.15	2.75	0.085	0.108
E	1.00	1.60	0.039	0.063
F	0.02	0.20	0.000	0.008
G	7.60	8.00	0.299	0.315
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.20REF		0.323REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
US10ACQ-US10MCQ	DO-214AB(SMC)	3000PCS	13"

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By QR Code

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