

Surface Mount Rectifiers

US1AB--US1MB

FEATURES

- Plastic package has underwriters laboratories
flam mability classification 94V-0
- For surface mount applications
- Low profile package
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Low forward voltage, low power loss
- Built-in strain relief, ideal for automated placement
- High temperature soldering:
- 250°C/10 seconds on terminals



Lead-free



MECHANICAL DATA

- Case: JEDEC SMB, molded plastic body over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounces, 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

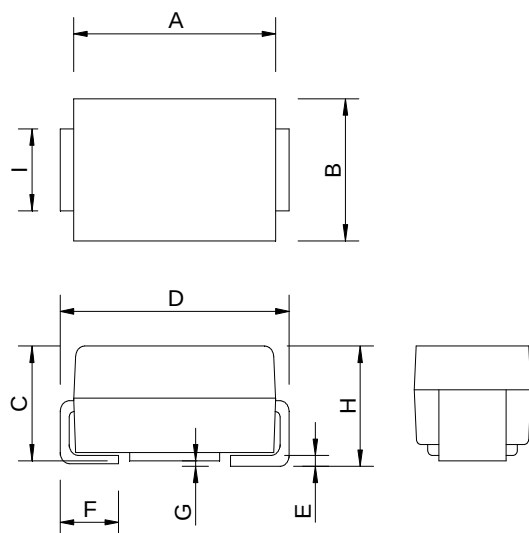
		US1AB	US1BB	US1DB	US1GB	US1JB	US1KB	US1MB	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RWS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T _L =110℃	I _{F(AV)}	1.0							A
Peak forward surge current 8.3ms single half sine-wave super imposed on rated load(JEDEC Method)	I _{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V _F	1.0				1.7			V
Maximum DC reverse current @T _A =25℃ at rated DC blocking voltage @T _A =125℃	I _R	5.0 100.0							μ A
Maximum reverse recovery time at I _F =0.5A I _R =1.0A I _{rr} =0.25A	t _{rr}	50				75			ns
Typical junction capacitance at 4.0V,1MHZ	C _J	20				15			p F
Maximum thermal resistance (NOTE1)	R _{θJA}	55							℃/W
	R _{θJL}	20							
Operating temperature range	T _J	-55-----+150							℃
Storage temperature range	T _{STG}	-55-----+150							℃

NOTE: 1.P.C.B.mounted on 0.2X0.2"(5.0X5.0mm) copper pad area

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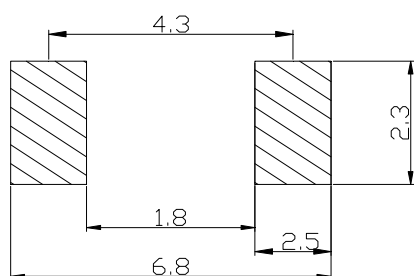
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PACKAGE OUTLINE DIMENSIONS



DO-214AA(SMB)		
Dim	Min	Max
A	4.30	4.70
B	3.30	3.70
C	2.00	2.30
D	5.05	5.55
E	0.10	0.30
F	0.95	1.55
G	0.20MAX	
H	2.10	2.50
I	1.85	2.15
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
US1AB--US1MB	DO-214AA(SMB)	3000/Tape&Reel

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FIG.1 – FORWARD CURRENT DERATING CURVE

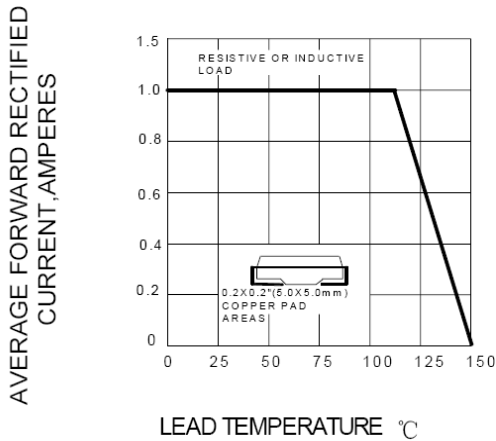


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

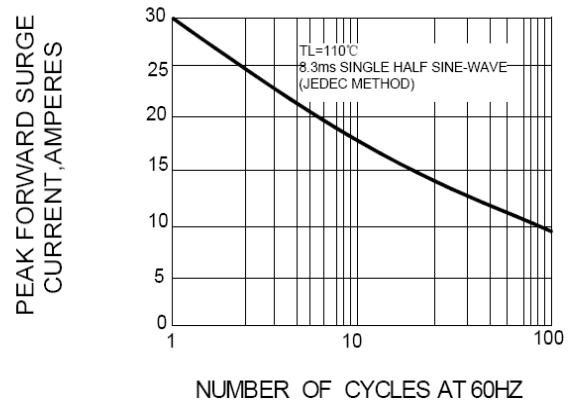


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

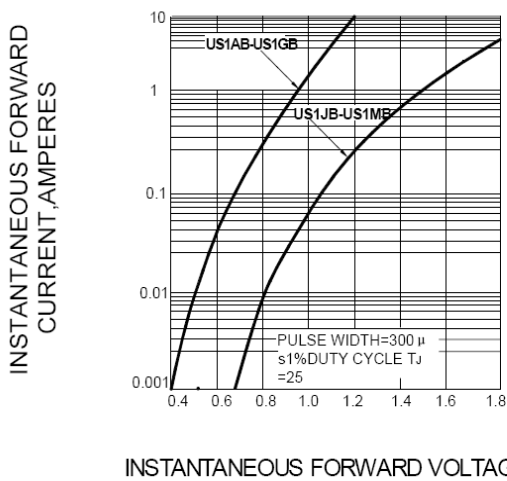


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

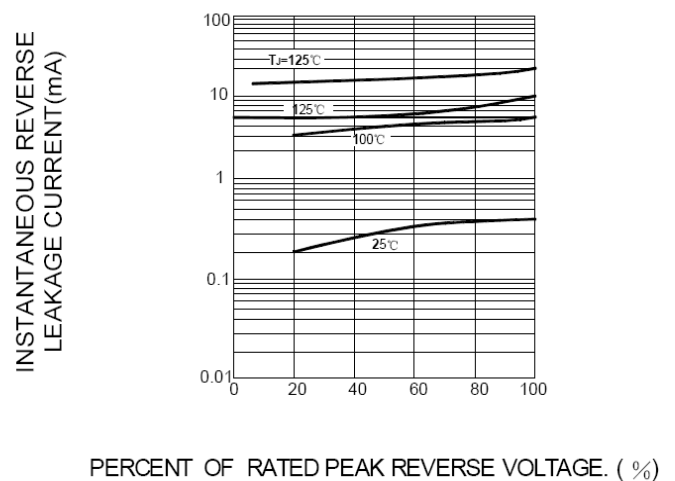


FIG.5 – TYPICAL JUNCTION CAPACITANCE

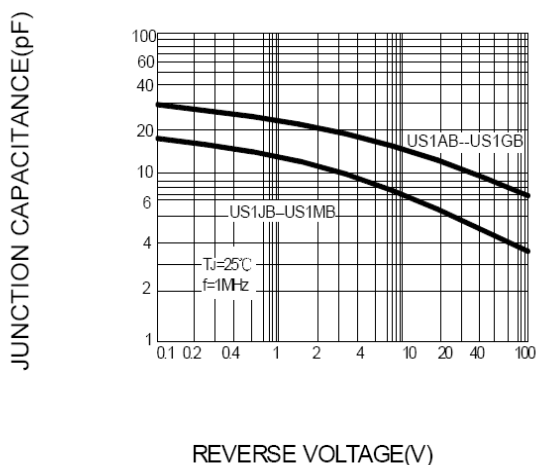


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

