US1AB-US1MB

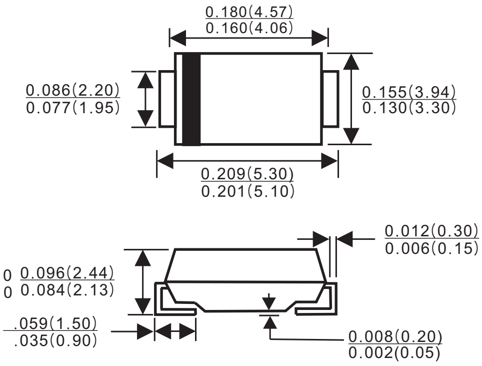
1.0AMP. Surface Mount High Efficiency Rectifiers

REVERSE VOLTAGE: 50 - 1000 V
FORWARD CURRENT: 1.0 A

Features

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ For surface mount applications
- ✧ Glass passivated chip junctions
- ✧ 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

SMB/DO-214AA



Dimensions in inches and(millimeters)

Mechanical Data

- ✧ Case:JEDEC SMB,molded plastic body over passivated chip
- ✧ 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

Parameter	**Symbol**	US1AB	US1BB	US1DB	US1GB	US1JB	US1KB	US1MB	UNITS
Marking code		US1A	US1B	US1D	US1G	US1J	US1K	US1M	
Maximum repetitive 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°C	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at1.0A	V_F	1.0			1.3	1.7			V
Maximum DC reverse current @T_A=25°C at rated DC blockjing voltage @T_A=125°C	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,1MH$_Z$	C_J	20				15			pF
Maximum thermal resistance (NOTE1)	$R_{\theta JA}$ $R_{\theta JL}$	55 20							°C/W
Operating temperature range	T_J	-55------- +150							°C
Storage temperature range	T_{STG}	-55------- +150							°C

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

Ratings AND Charactieristic Curves

FIG.1 – FORWARD CURRENT DERATING CURVE

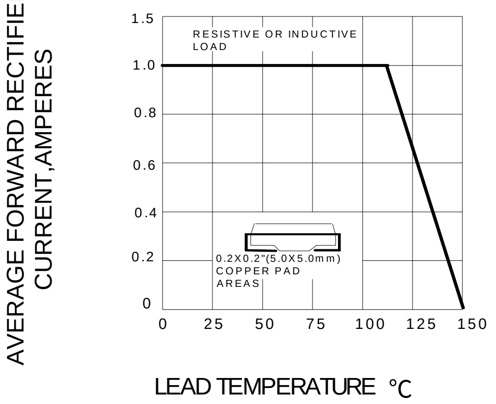


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

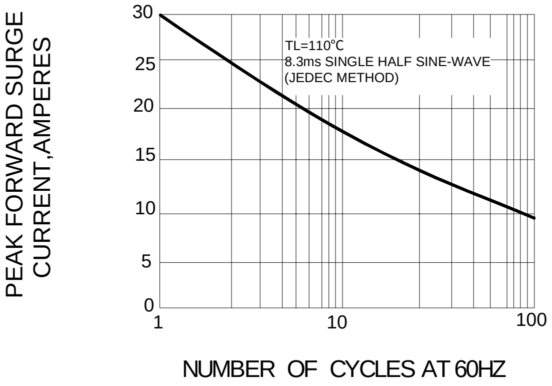


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

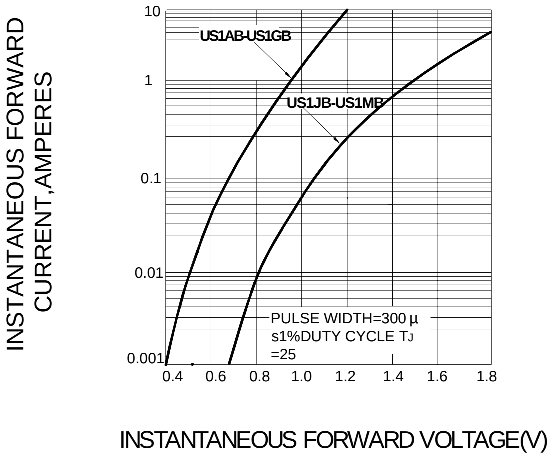


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

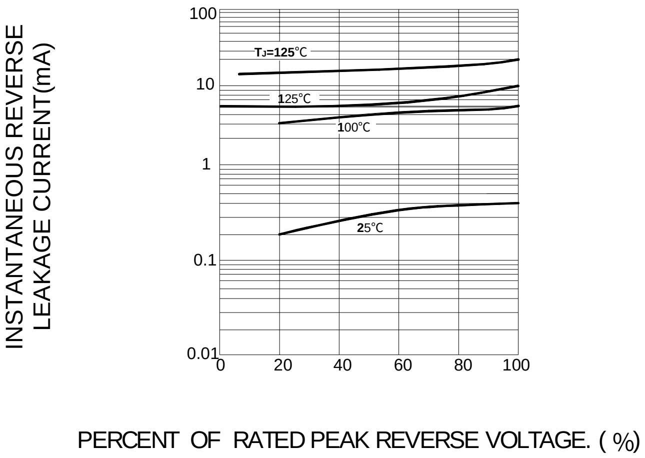


FIG.5 – TYPICAL JUNCTION CAPACITANCE

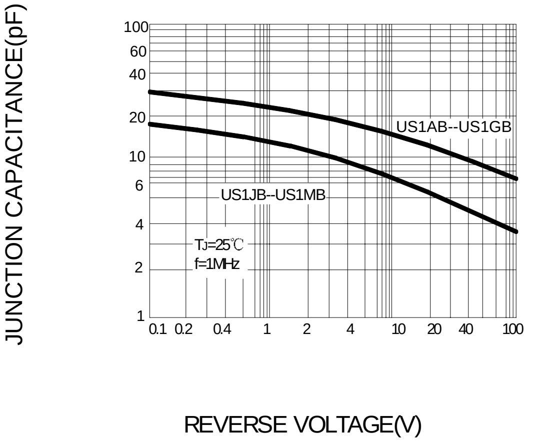
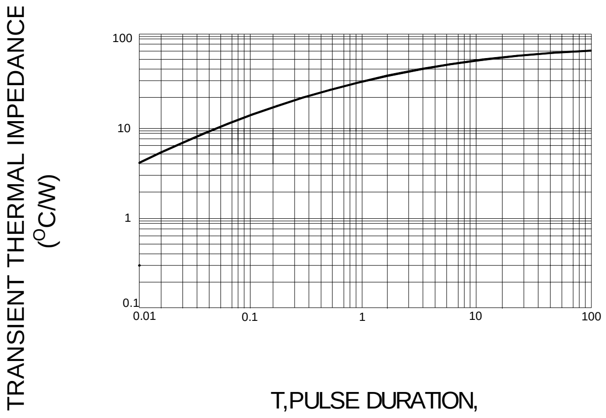


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMB	3000/REEL	48000	36X35.8X36.5	12.00	11.00