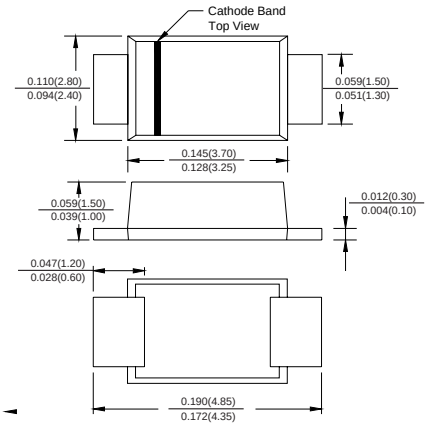
US2AAF--US2MAF

Surface Mount Rectifiers

SMAF



Dimensions in inches and (millimeters)

FEATURES

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

MECHANICAL DATA

- Case: JEDEC SMAFL, molded plastic body over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end

Maximum Ratings (@TA = 25°C unless otherwise specified)

Parameter	Symbol	US2AAF	US2BAF	US2DAF	US2GAF	US2JAF	US2KAF	US2MAF	
Marking code		**US2A**	**US2B**	**US2D**	**US2G**	**US2J**	**US2K**	**US2M**	**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=90℃	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3ms single half sine-wave super imposed on rated load	I_{FSM}	50							A

Thermal Characteristics

Characteristic	Symbol	US2AAF	US2BAF	US2DAF	US2GAF	US2JAF	US2KAF	US2MAF	UNITS
Typical junction capacitance at 4.0V,1MHZ	C_J	50				30			p F
Maximum thermal resistance (NOTE1)	$R_{\theta JA}$ $R_{\Theta JL}$	40 15							℃/W
Operating temperature range	T_J	-55------- +150							℃
Storage temperature range	T_{STG}	-55------- +150							℃

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	US2AAF	US2BAF	US2DAF	US2GAF	US2JAF	US2KAF	US2MAF	UNITS
Maximum instantaneous forward voltage at 2.0A	V_F	1.0			1.30	1.7			V
Maximum DC reverse current @T_A=25℃ at rated DC blocking voltage @T_A=125℃	I_R	10.0 350							μ A
Maximum reverse recovery time at I_F=0.5A I_R=1.0A I_{rr}=0.25A	t_{rr}	50				75			ns

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

FIG.1 – FORWARD CURRENT DERATING CURVE

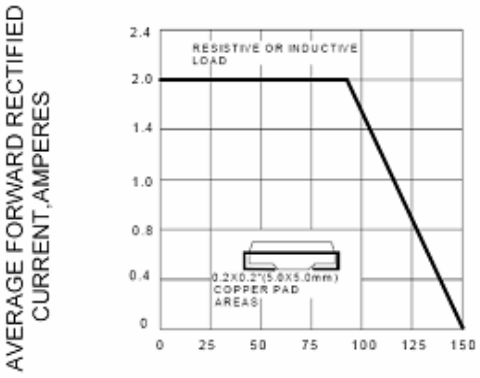


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

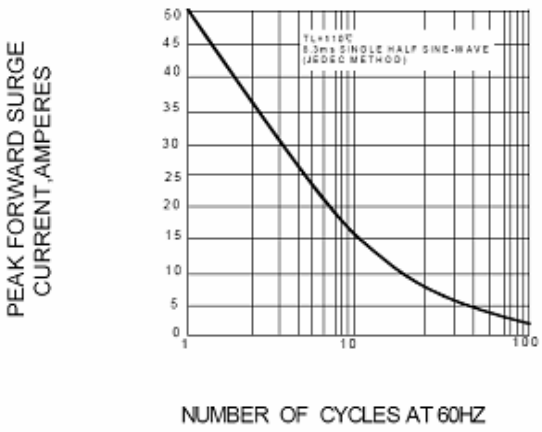


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

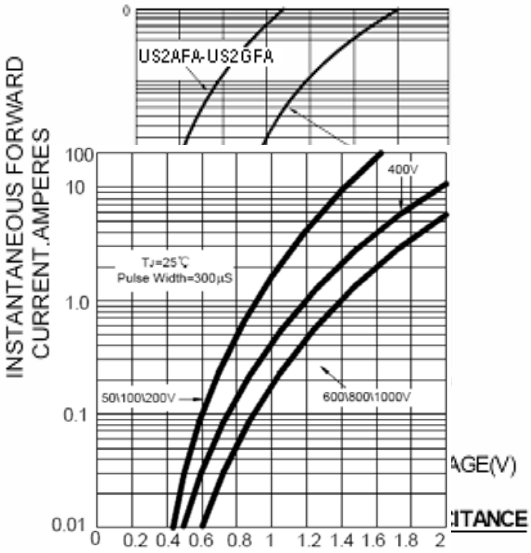


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

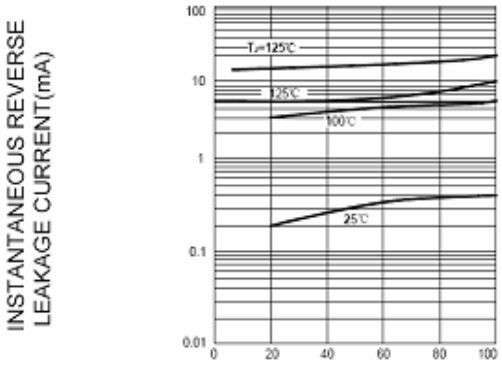
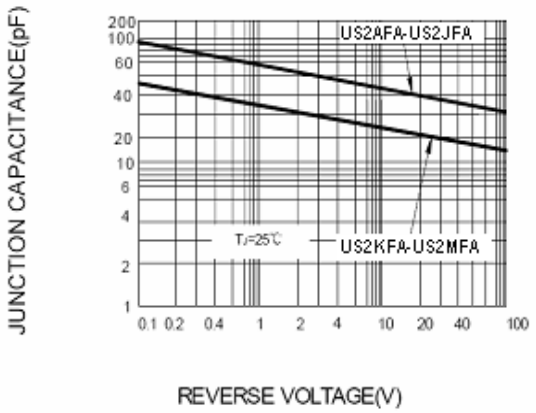
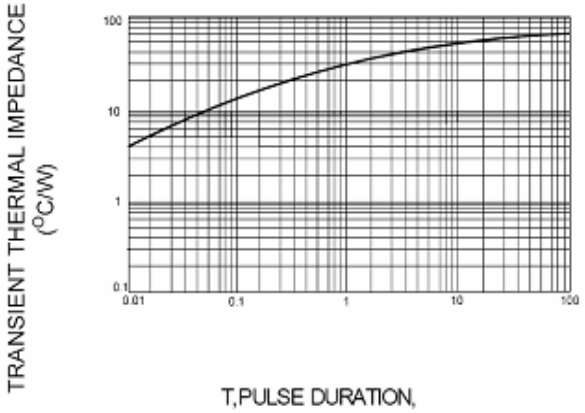


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE





PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	3000/REEL	120000	30.5X30.5X42.5	12.00	11.00
PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMAF	5000/REEL	100000	30.5X30.5X42.5	10.00	9.00