

US2A-US2M

Surface Mount Rectifiers

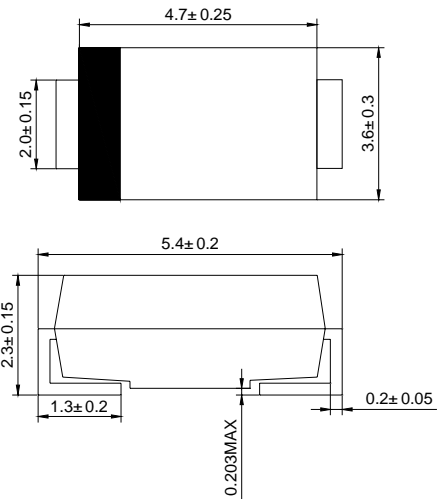
REVERSE VOLTAGE: 50 - 1000 V
FORWARD CURRENT: 2.0 A



DO-214AA(SMB)

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



Dimensions in millimeters

Mechanical Data

- ◇ Case: JEDEC DO-214AA, 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

		US2A	US2B	US2D	US2G	US2J	US2K	US2M	UNITS
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 @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Maximum instantaneous forward voltage at 2A	V_F	1.0				1.7			V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R	10				350			μA
Maximum reverse recovery time at $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{tr}=0.25\text{A}$	t_{rr}	50				75			ns
Typical junction capacitance at 4.0V, 1MHz	C_J	50				30			pF
Maximum thermal resistance (NOTE1)	$R_{\theta JA}$ $R_{\theta JL}$	40				15			$^\circ\text{C/W}$
Operating temperature range	T_J	-55-----+150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55-----+150							$^\circ\text{C}$

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

Ratings AND Characteristic Curves

FIG.1 – FORWARD CURRENT DERATING CURVE

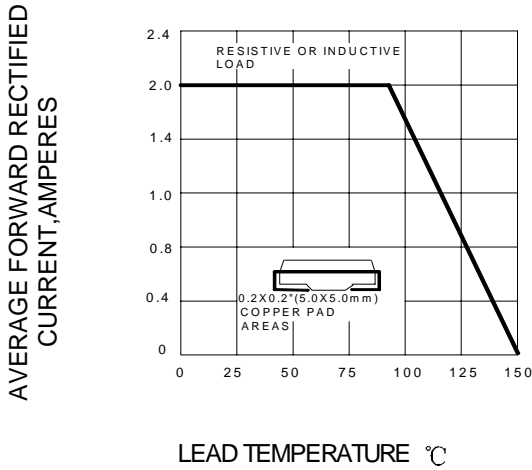


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

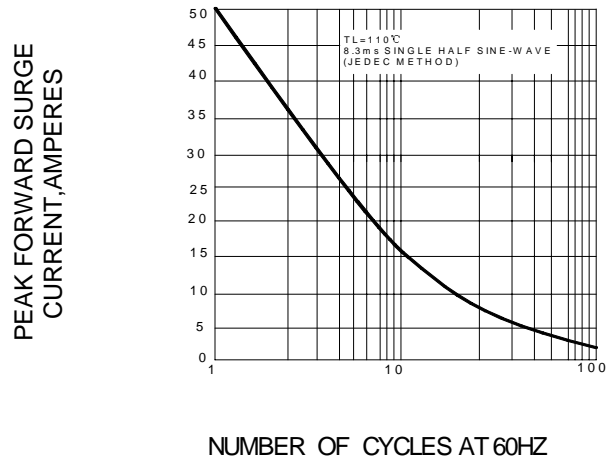


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

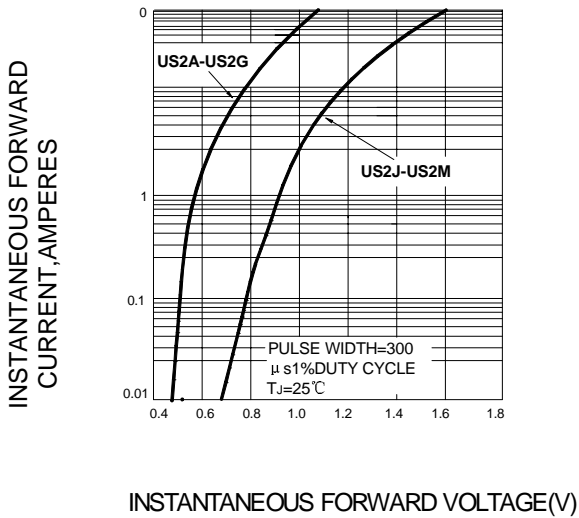


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

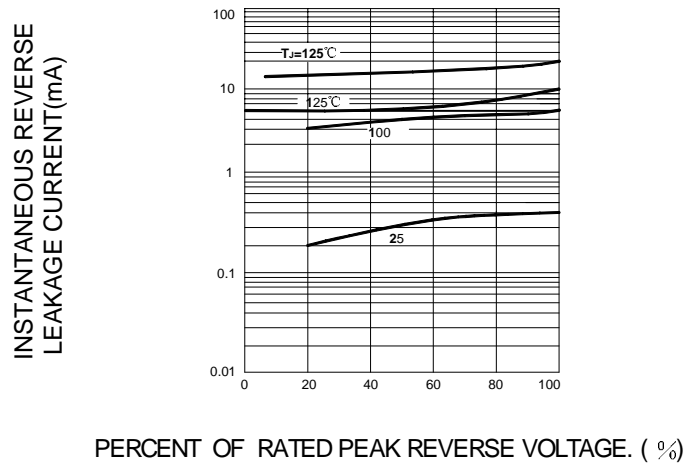


FIG.5 – TYPICAL JUNCTION CAPACITANCE

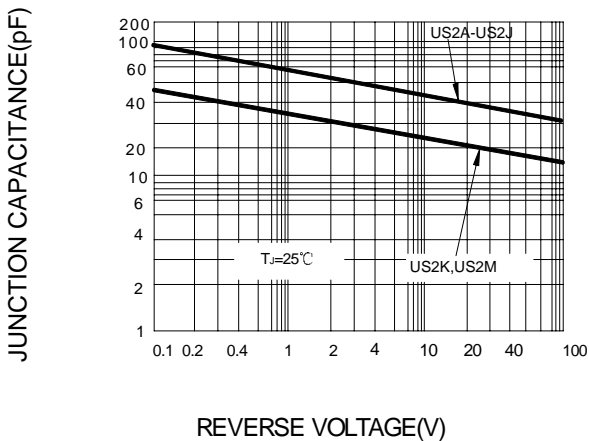


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

