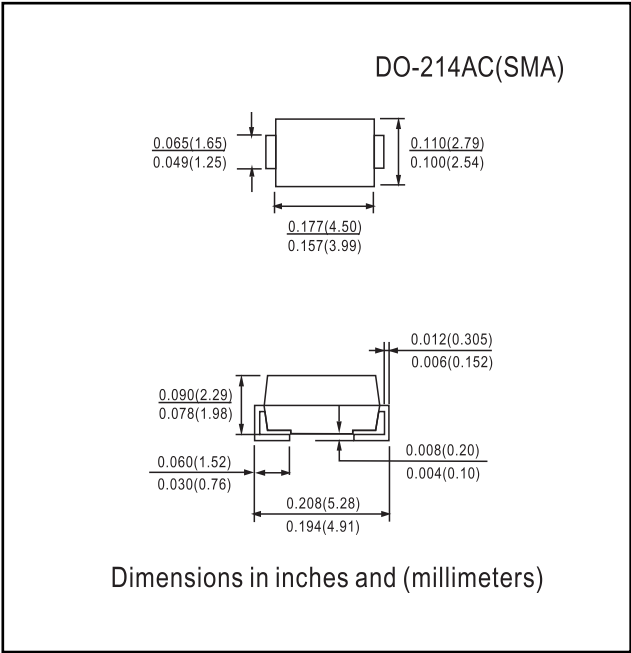




TAYCHIPST Surface Mount Ultrafast Rectifiers

US2AA THRU US2MA
50V-1000V 2.0A

- 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



Mechanical Data

Case: JEDEC DO-214AC, molded plastic body over passivated chip

Polarity: Color band denotes cathode end

Weight: 0.002 ounces, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

Device marking code		US2AA	US2BA	US2DA	US2GA	US2JA	US2KA	US2MA	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 @ $T_A=100^\circ\text{C}$	I_R	10					350			μA
Maximum reverse recovery time at $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$	t_{rr}	50				75			ns	
Typical junction capacitance at 4.0V, 1MHz	C_J	50				30			pF	
Maximum thermal resistance (NOTE1)	$R_{\theta JA}$ $R_{\theta JL}$	50 18							$^\circ\text{C/W}$	
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 US2AA THRU US2MA

FIG.1 – FORWARD CURRENT DERATING CURVE

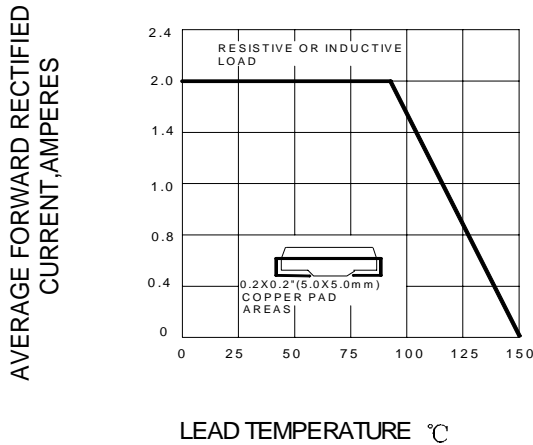


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

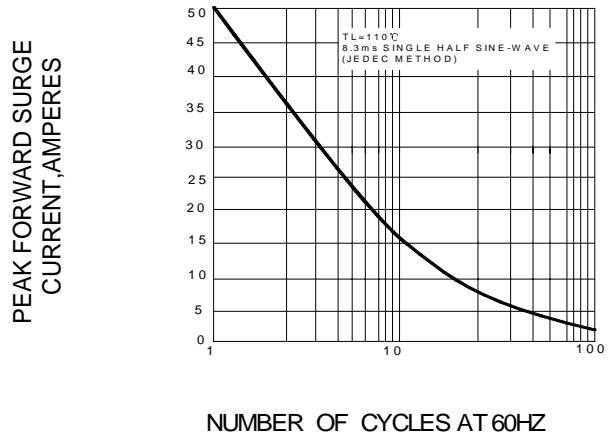


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

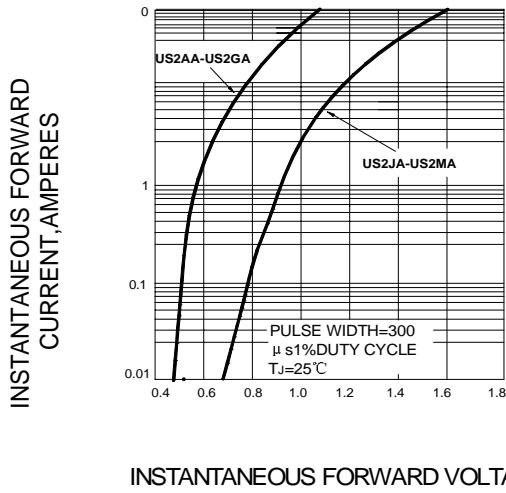


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

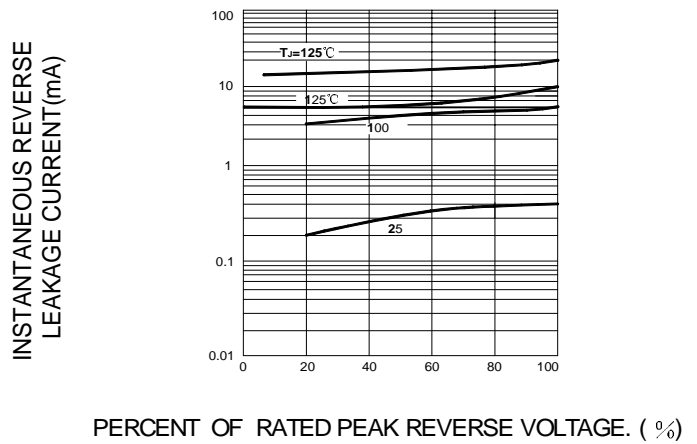


FIG.5 – TYPICAL JUNCTION CAPACITANCE

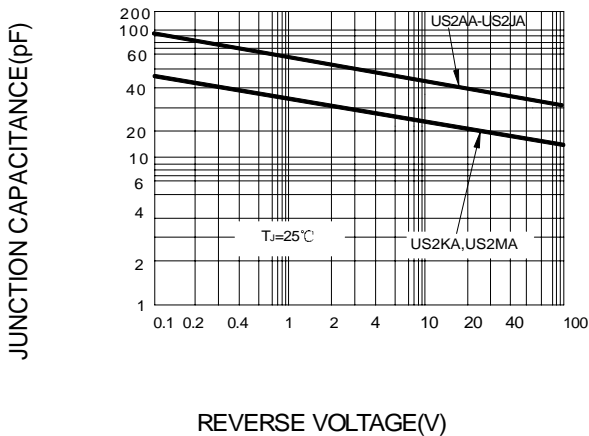


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

