SAMYANG ELECTRONICS

US3AA---US3MA

ULTRA FAST RECTIFIER

REVERSE VOLTAGE: 50 - 1000 V
FORWARD CURRENT: 3.0 A

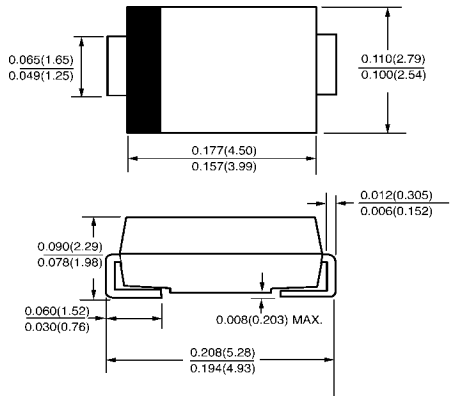
FEATURES

- ◇ 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

MECHANICAL DATA

- ◇ Case:JEDEC DO-214AC,molded plastic body over passivated chip
- ◇ Terminals:Solder plated, solderable per MIL-STD-750, method 2026
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.002 ounces, 0.064 gram

DO-214AC(SMA)



inch(mm)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		US3AA	US3BA	US3DA	US3GA	US3JA	US3KA	US3MA	UNITS
Device marking code		US3AA	US3BA	US3DA	US3GA	US3JA	US3KA	US3MA	
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 forw ard rectified current at T_L=110°C	$I_{F(AV)}$	3.0							A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load(JEDEC Method)	I_{FSM}	100							A
Maximum instantaneous forw ard voltage at 3A	V_F	1.0				1.7			V
Maximum DC reverse current @T_A=25°C	I_R	10.0							μA
at rated DC blockjing voltage @T_A=125°C		300.0							
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	70				50			pF
Maximum thermal resistance (NOTE1)	$R_{\theta JA}$	25							°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

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FIG.1 – FORWARD CURRENT DERATING CURVE

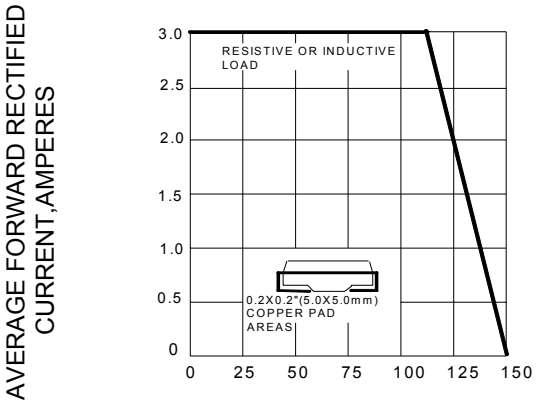

FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

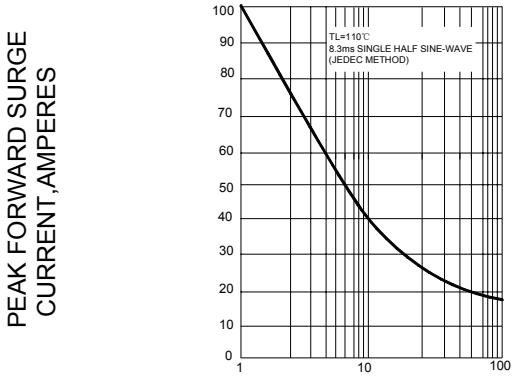

FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

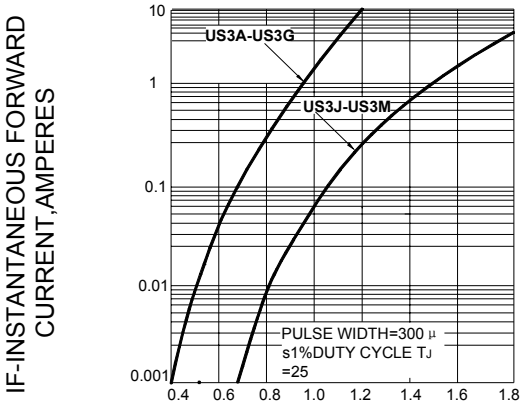

FIG.4 – TYPICAL REVERSE CHARACTERISTICS

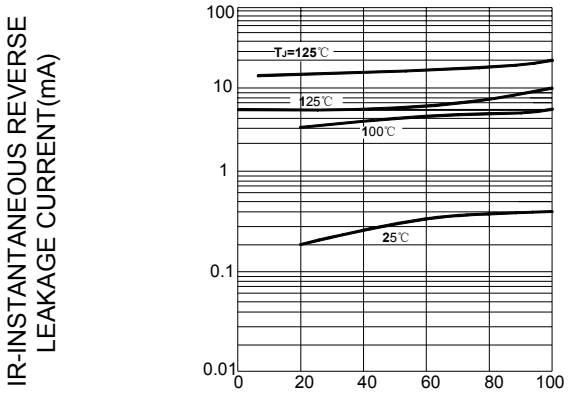

FIG.5 – TYPICAL JUNCTION CAPACITANCE

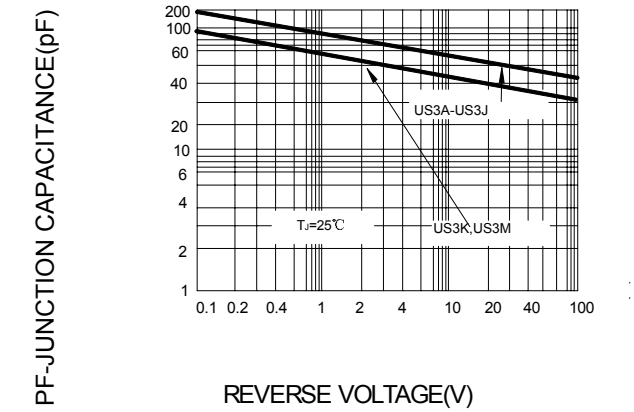

FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE