



US3A---US3M

ULTRA FAST RECOVERY RECTIFIERS

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

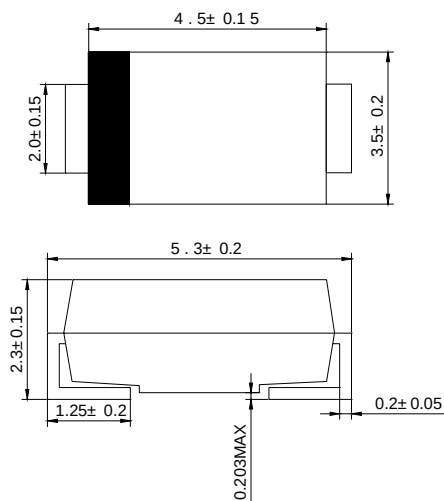
FEATURES

- ◇ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◇ For surface mount applications
- ◇ 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-214AA, molded plastic body over passivated chip
- ◇ Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.003 ounces, 0.093 gram

DO-214AA(SMB)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

Device marking code		US3A	US3B	US3D	US3G	US3J	US3K	US3M	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 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}	100.0							A
Maximum instantaneous forw ard voltage at 3A	V _F	1.0				1.7			V
Maximum DC reverse current @T _A =25°C at rated DC blockjng voltage @T _A =125°C	I _R	5.0 500							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	70				50			pF
Maximum thermal resistance (NOTE1)	R _{θJA}	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

FIG.1 -- FORWARD CURRENT DERATING CURVE

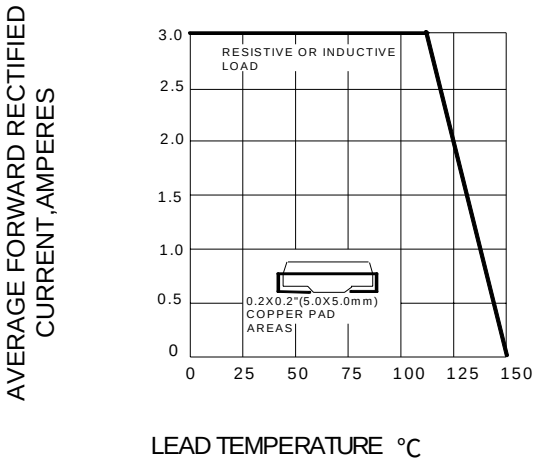


FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

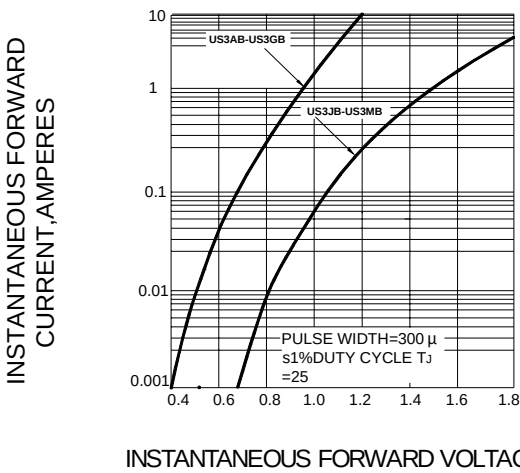


FIG.5 -- TYPICAL JUNCTION CAPACITANCE

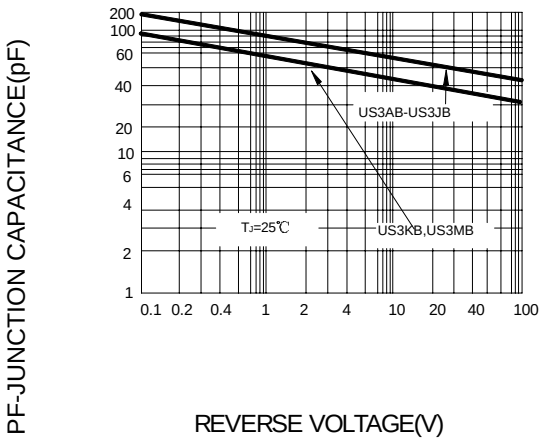


FIG.2 -- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

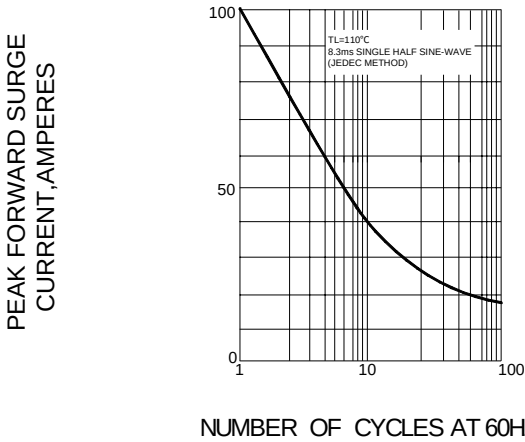


FIG.4 -- TYPICAL REVERSE CHARACTERISTICS

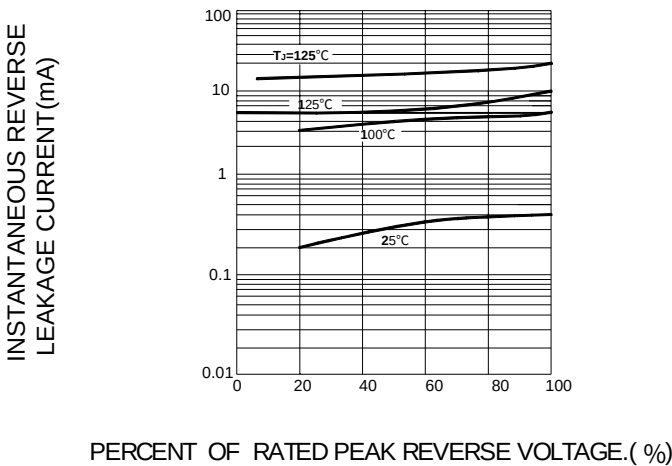


FIG.6 -- TYPICAL TRANSIENT THERMAL IMPEDANCE

