



US1A---US1M

ULTRA FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE: 50--- 1000 V CURRENT: 1.0 A

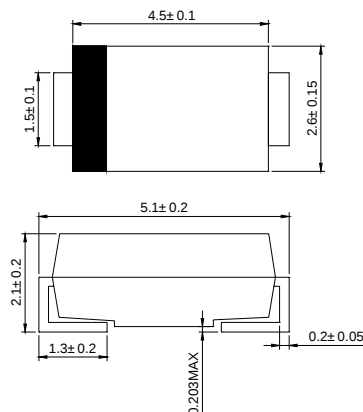
FEATURES

Plastic package has underwriters laboratories
flammability classification 94V-0
For surface mount applications
Low profile package
Easypick 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)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

Device marking code		US1A	US1B	US1D	US1G	US1J	US1K	US1M	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)}	1.0							A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load(JEDEC Method)	I _{FSM}	30.0							A
Maximum instantaneous forward voltage at1.0A	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	5.0 100.0							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	20				15			pF
Maximum thermal resistance (NOTE1)	R _{θJA}	55							°C/W
	R _{θJL}	20							
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

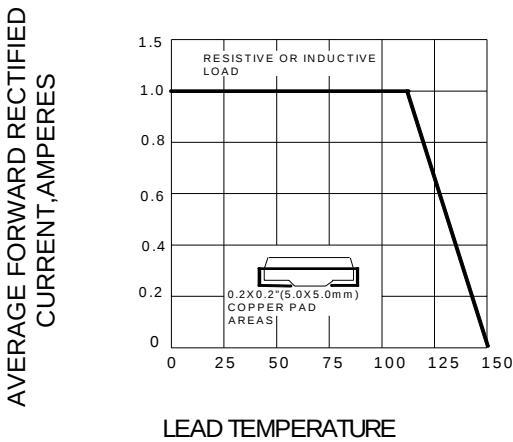


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

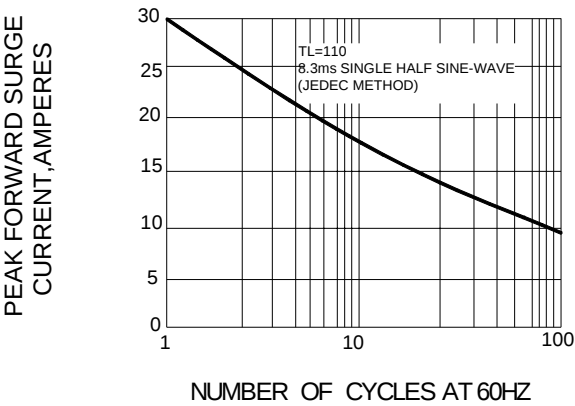


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

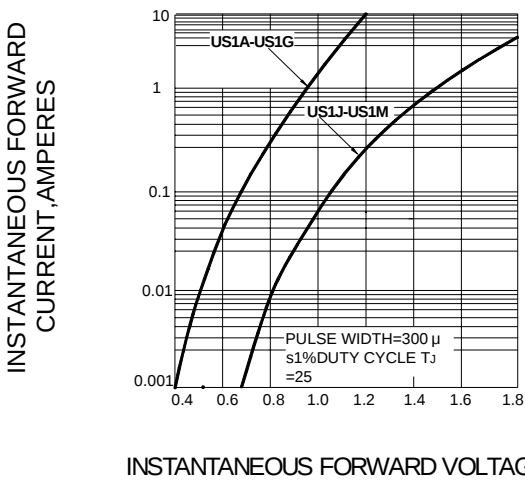


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

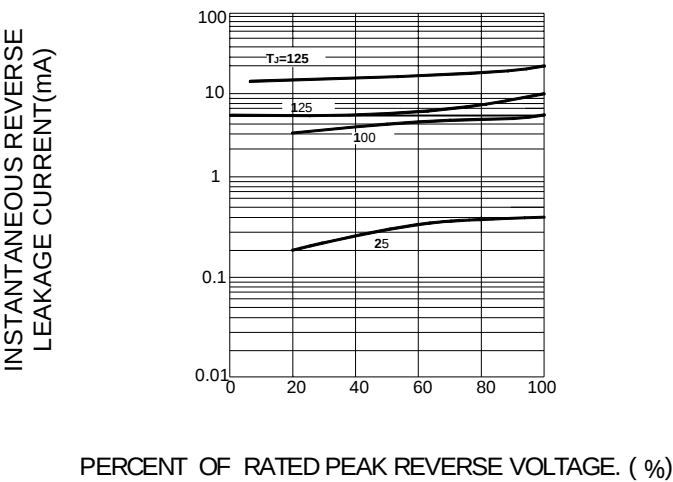


FIG.5 – TYPICAL JUNCTION CAPACITANCE

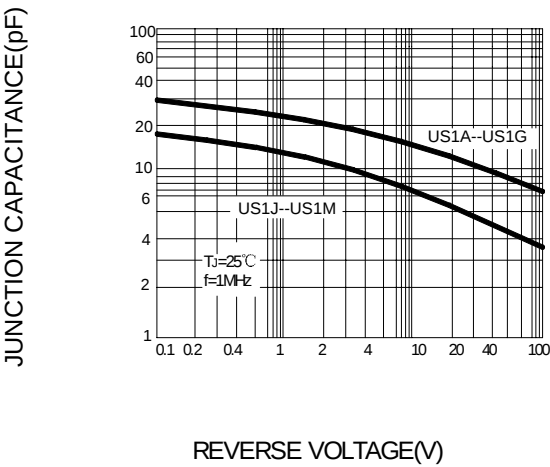


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

