Surface Mount Rectifiers

US1A--US1M

FEATURES

Lead-free

- 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:260℃/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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

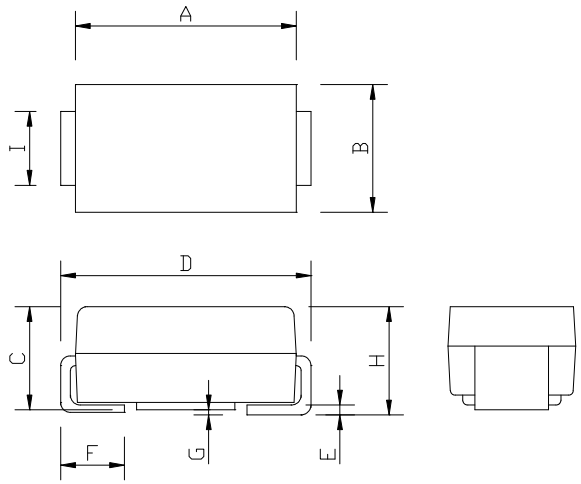
Ratings at 25℃ ambient temperature unless otherwise specified

		US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
Maximum recurrent 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 at T_L=110℃	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.0				1.7			V
Maximum DC reverse current @T_A=25℃ at rated DC blocking voltage @T_A=125℃	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,1MHZ	C_J	20				15			p F
Maximum thermal resistance (NOTE1)	$R_{\theta JA}$ $R_{\Theta JL}$	55 20							℃/W
Operating temperature range	T_J	-55------- +150							℃
Storage temperature range	T_{STG}	-55------- +150							℃

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

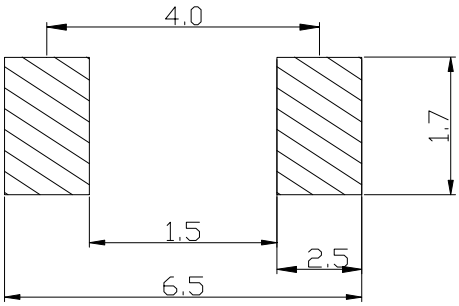
Surface Mount Rectifiers *US1A--US1M*

PACKAGE OUTLINE DIMENSIONS



DO-214AC(SMA)		
Dim	Min	Max
A	4.25	4.65
B	2.40	2.80
C	1.85	2.15
D	4.85	5.35
E	0.10	0.30
F	0.90	1.50
G	0.20MAX	
H	1.90	2.30
I	1.35	1.65
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit ： mm

PACKAGE INFORMATION

Device	Package	Shipping
US1A--US1M	DO-214AC(SMA)	5000/Tape&Reel

Surface Mount Rectifiers

US1A--US1M

FIG.1 – FORWARD CURRENT DERATING CURVE

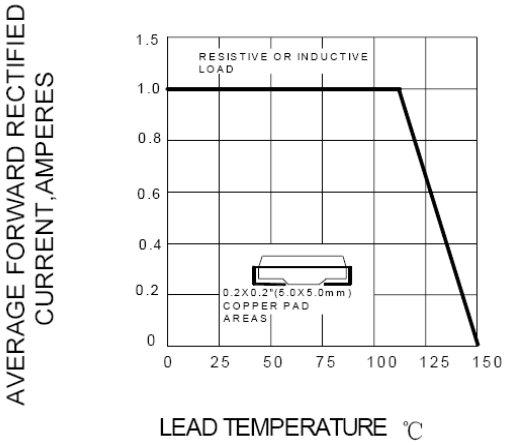


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

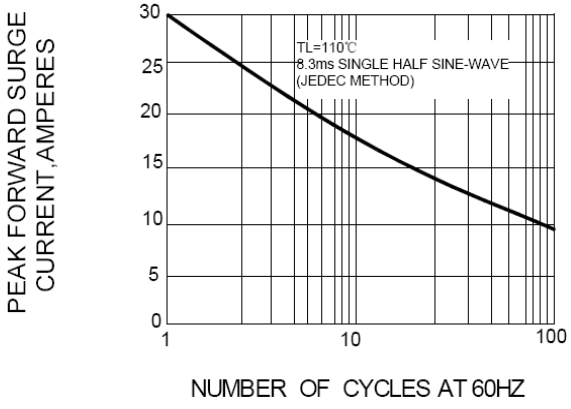


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

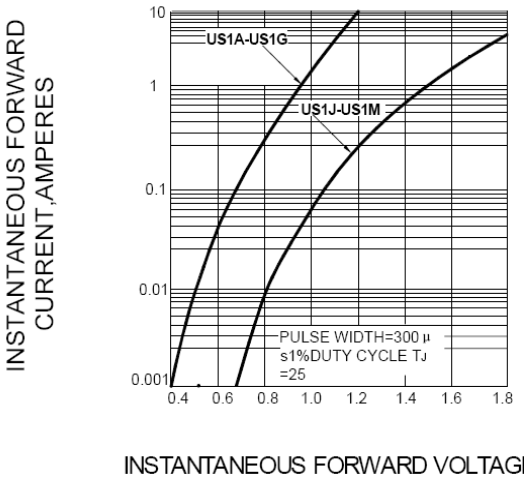


FIG.4 -- TYPICAL REVERSE CHARACTERISTICS

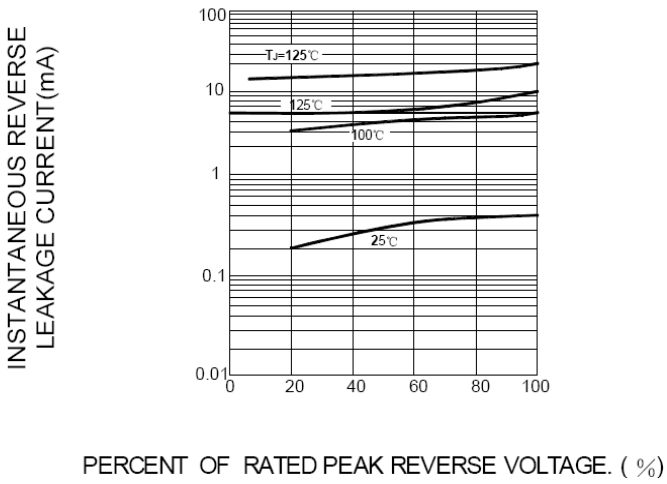


FIG.5 -- TYPICAL JUNCTION CAPACITANCE

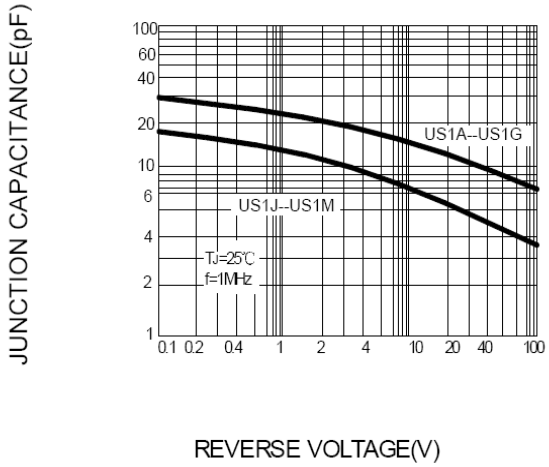


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE