



Features:

- Low Profile Package
- For Surface Mounted Applications
- Built-In Strain Relief, Ideal for Automated Placement
- High Temperature Soldering : 250°C/10 seconds at Terminals
- Easy Pick and Place
- Ultrafast Recovery Times for High Efficiency
- Low Forward Voltage, Low Power Loss

Mechanical Data

- Case : JEDEC DO-214AA, molded plastic over passivated chip
- Terminals : solder plated, solderable per MIL-STD-750, method 2026
- Polarity : Colour band denotes cathode end
- Weight : 0.002oz, 0.064g

Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Characteristic	Symbol	US1J-13-F	US1K-13-F	US1M-13-F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	600	800	1,000	V
Maximum RMS voltage	V_{RWS}	420	560	700	V
Maximum DC blocking voltage	V_{DC}	600	800	1,000	V
Maximum average forward rectified current at $T_L=110^\circ\text{C}$	$I_{F(AV)}$	1			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 1A	V_F	1.7			V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	5 100			μA
Maximum reverse recovery time at $I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{rr}=0.25\text{A}$	t_{rr}	75			ns
Typical junction capacitance at 4V,1MHz	C_J	15			pF
Maximum thermal resistance (Note1)	$R_{\theta JA}$ $R_{\theta JL}$	55 20			$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150			$^\circ\text{C}$

Note:

(1) PCB mounted on 0.2" x 0.2" (5 x 5mm²) copper pad areas

FIG.1 – FORWARD CURRENT DERATING CURVE

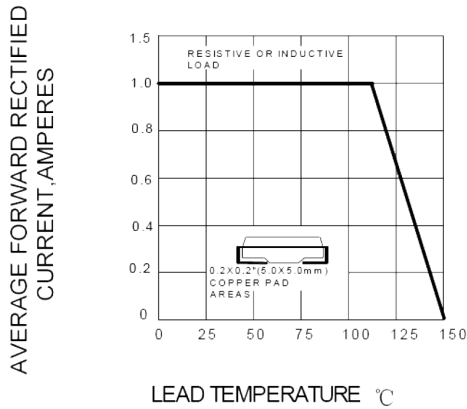


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

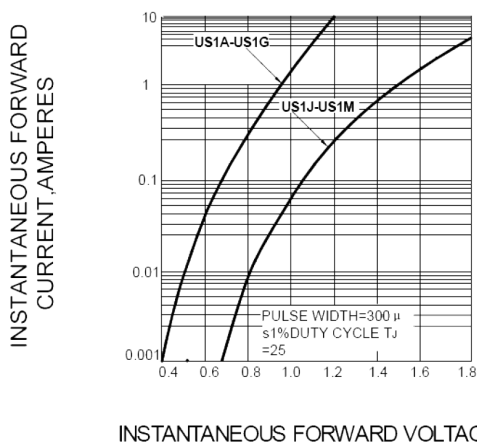


FIG.5 – TYPICAL JUNCTION CAPACITANCE

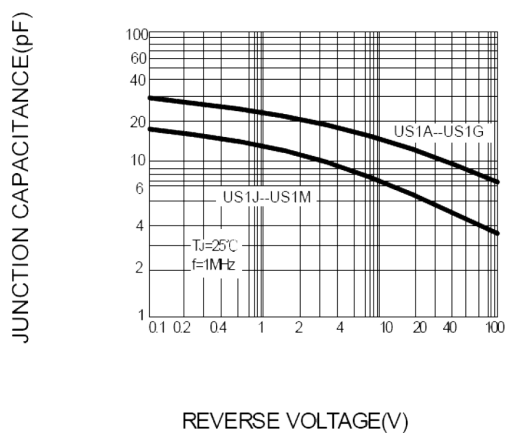


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

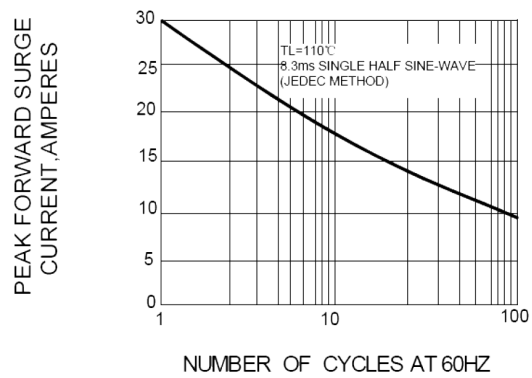


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

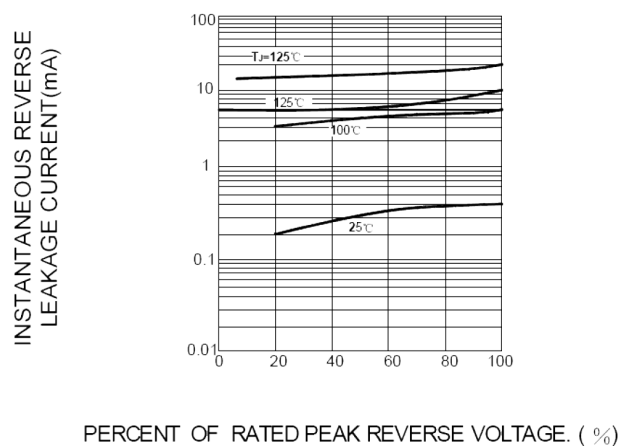
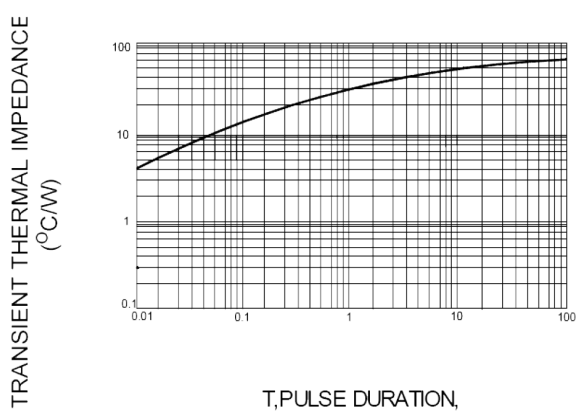
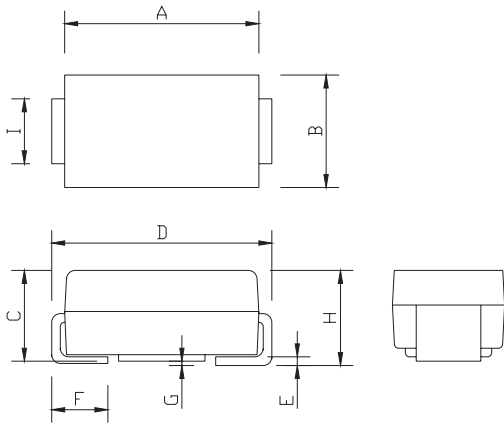


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE



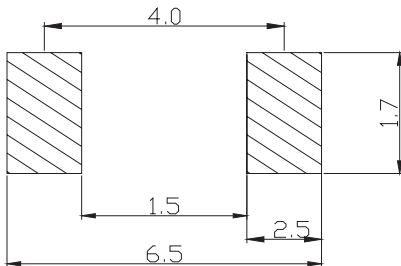
Package Outline Dimensions



DO-214AC(SMA)		
Dim.	Min.	Max.
A	4.25	4.65
B	2.4	2.8
C	1.85	2.15
D	4.85	5.35
E	0.2 Typ.	
F	0.9	1.5
G	0.2 Max.	
H	1.9	2.3
I	1.35	1.65

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Package Information

Device	Package	Shipping
US1J-13-F US1K-13-F US1M-13-F	DO-214AC(SMA)	5,000 / Tape & Reel

Part Number Table

Description	Part Number
Surface Mount Rectifier	US1J-13-F
	US1K-13-F
	US1M-13-F

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.