

CURRENT 6.0 Ampere
 VOLTAGE RANG 50 to 1000 Volts

US6AC THRU US6MC

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Glass passivated chip junction

MECHANICAL DATA

Case : JEDEC DO-214AB molded plastic body over passivated chip

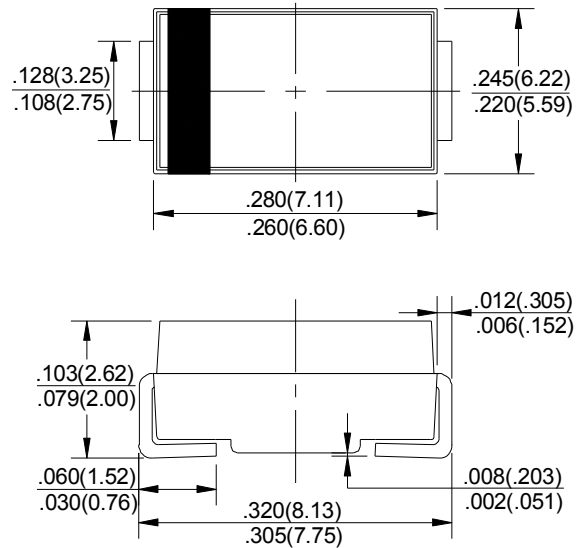
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes cathode end

Mounting Position : Any

Weight :0.007 ounce, 0.25grams

DO-214AB/SMC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Catalog Number	SYMBOLS	US6A	US6B	US6D	US6G	US6J	US6K	US6M	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	6.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250							Amps
Maximum instantaneous forward voltage at 5.0A	V_F	1.0		1.4	1.7			Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10.0 300.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	50				75			ns
Typical junction capacitance (NOTE 2)	C_J	15				12			pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	15.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							$^\circ\text{C}$

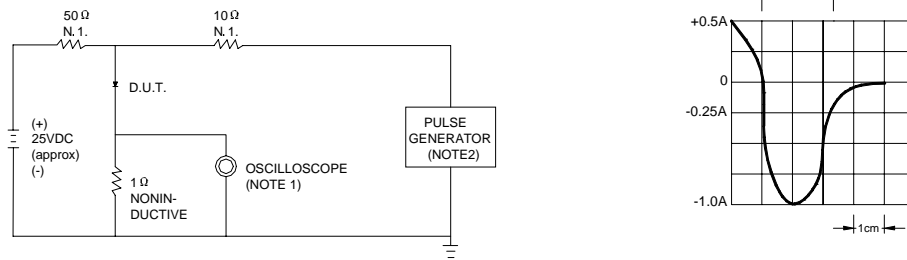
Note: 1.Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

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RATING AND CHARACTERISTIC CURVES US6A Thru US6M

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1. RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.
 2. RISE TIME = 10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

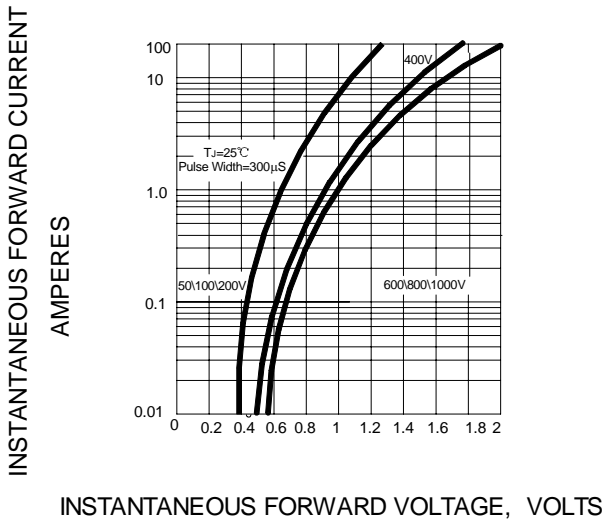


FIG.3- MAXIMUM FORWARD CURRENT DERATING CURVE

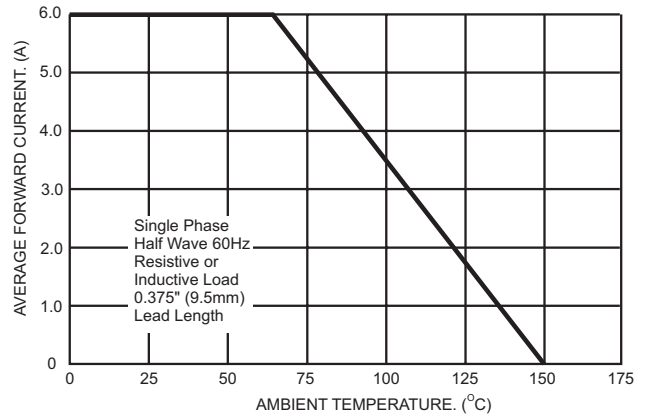


FIG.4 – TYPICAL JUNCTION CAPACITANCE

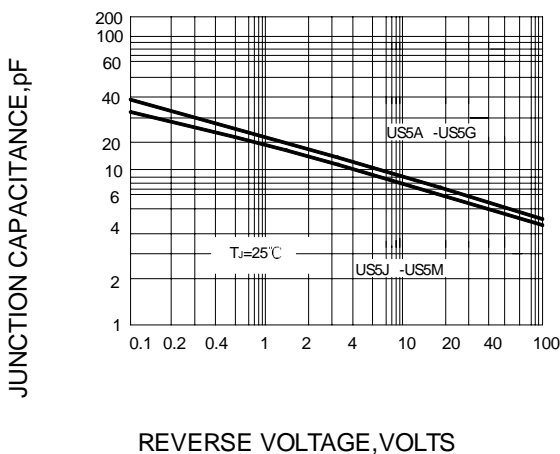


FIG.5 – PEAK FORWARD SURGE CURRENT

