

US1A - US1J

PRV : 50 ~ 600 Volts
Io : 1.0 Ampere

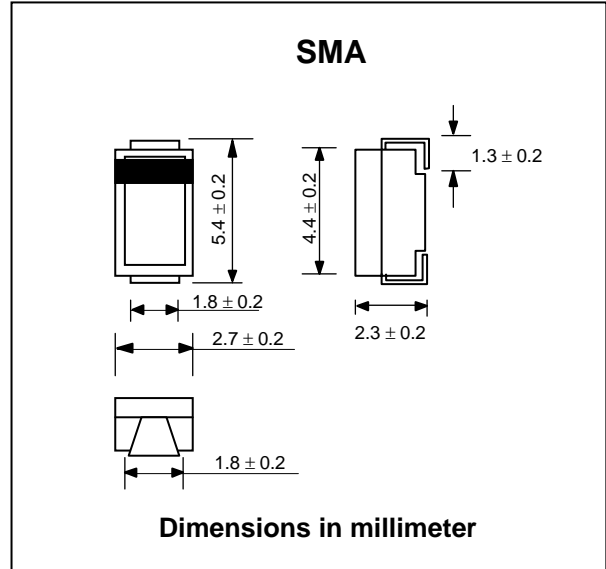
FEATURES :

- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SMA Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.060 gram (Approximately)

SURFACE MOUNT ULTRA FAST RECTIFIERS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specific.
 Single phase, half wave, 60 Hz, resistive or inductive load
 For capacitive load, derate current by 20%

RATING	SYMBOL	US1A	US1B	US1D	US1G	US1J	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	V
Maximum Continuous Reverse Voltage	V _R	50	100	200	400	600	V
Maximum Average Forward Current	I _{F(AV)}	1.0					A
Maximum non-repetitive peak forward current 8.3ms Single half sine wave,	I _{FSM}	30					A
Maximum Instantaneous Forward Voltage at I _F = 1.0 A	V _F	1.1				1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _a = 25 °C	10					μA
	T _a = 100 °C	50					μA
Maximum Reverse Recovery Time ⁽¹⁾	T _{rr}	50				75	ns
Typical Junction Capacitance ⁽²⁾	C _J	15				10	pf
Junction Temperature Range	T _J	- 65 to + 175					°C
Storage Temperature Range	T _{STG}	- 65 to + 175					°C

Notes :

- (1) Reverse Recovery Test Conditions : I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

RATING AND CHARACTERISTIC CURVES (US1A - US1J)

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

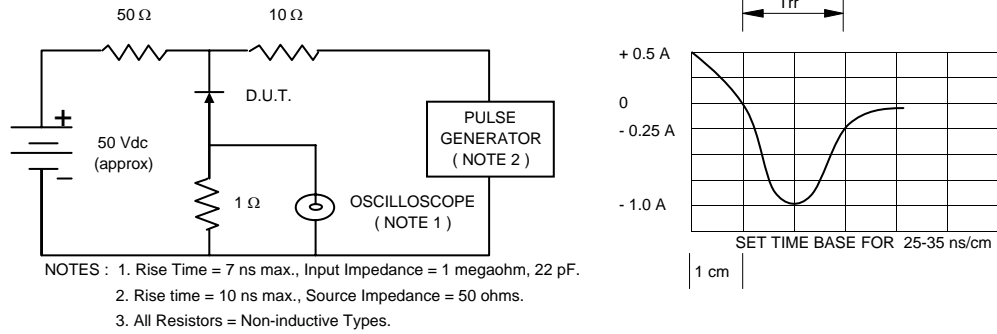


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

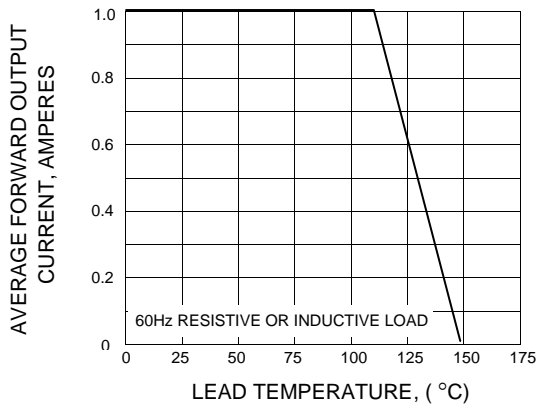


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

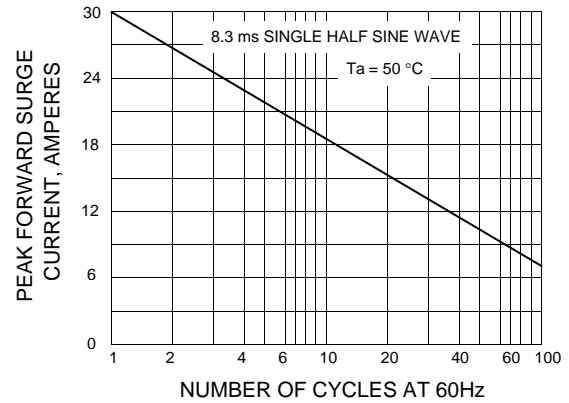


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

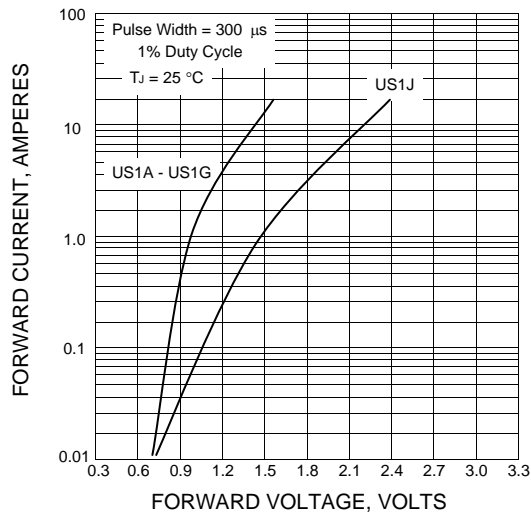


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

