

05NU42

PRV : 1000 Volts

Io : 0.5 Amperes

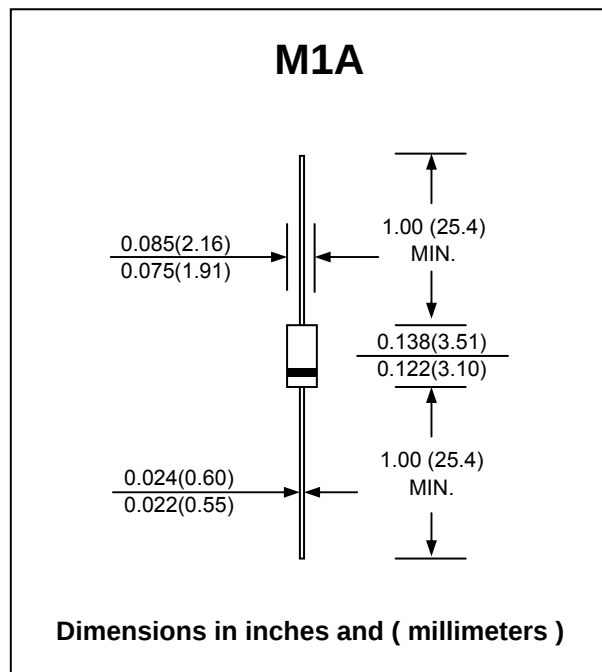
FEATURES :

- * 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 : M1A Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.20 gram (approximately)

FAST RECOVERY RECTIFIER



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum Average Forward Current	$I_{F(AV)}$	0.5	A
Maximum Peak One Cycle Surge Forward Current (Non-Repetitive)	I_{FSM}	10 (50Hz) 11 (60Hz)	A
Maximum Peak Forward Voltage at $I_F = 0.5$ A	V_F	3.0	V
Maximum Repetitive Peak Reverse Current at V_{RRM}	I_R	100	μ A
Maximum Reverse Recovery Time (Note 1)	T_{rr}	100	ns
Junction Temperature Range	T_J	- 40 to + 150	°C
Storage Temperature Range	T_{STG}	- 40 to + 150	°C

Note:

(1) Reverse Recovery Test Conditions : $I_F = 1$ A, $di/dt = -30$ A/ μ s.

RATING AND CHARACTERISTIC CURVES (05NU42)

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

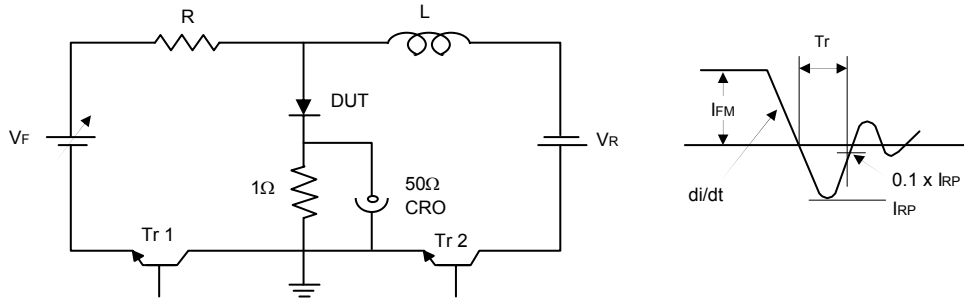


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

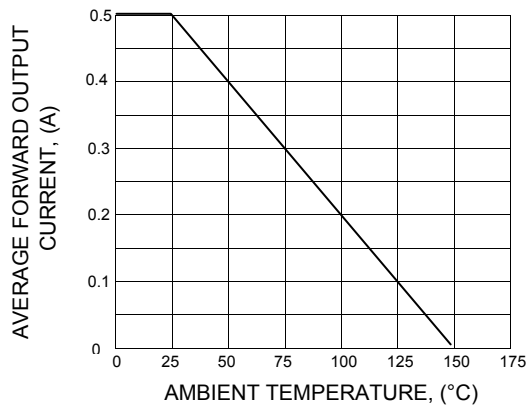


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

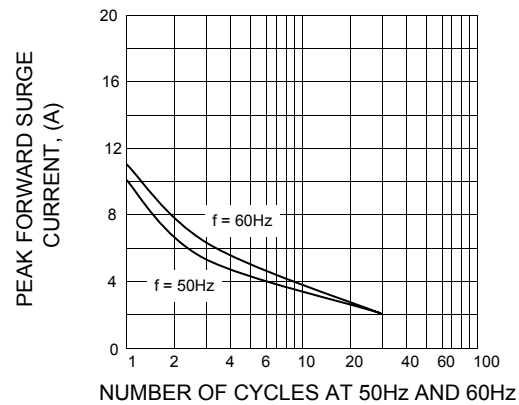


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

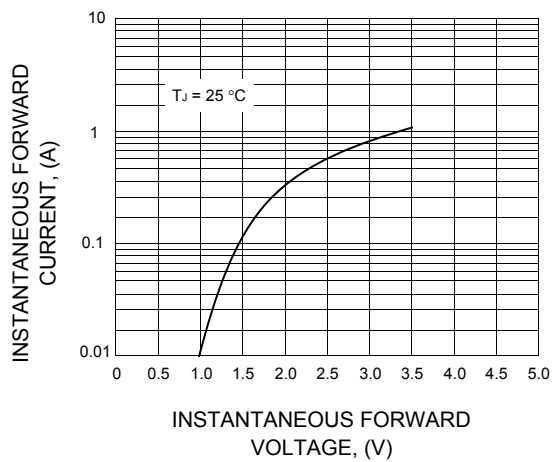


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

