

ES1 - ES1Z

FAST RECOVERY RECTIFIER DIODES

PRV : 200 - 600 Volts

Io : 0.7 Ampere

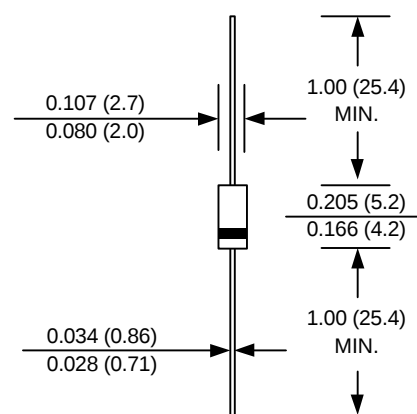
FEATURES :

- * 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 : DO-41 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 : 0.339 gram

DO - 41



Dimensions in inches and (millimeters)

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	ES1Z	ES1	ES1A	UNIT
Maximum Peak Reverse Voltage	V_{RM}	200	400	600	V
Maximum Peak Reverse Surge Voltage	V_{RSM}	250	450	650	V
Maximum Average Forward Current	$I_{F(AV)}$	0.7			A
Maximum Peak Forward Surge Current (50 Hz, Half-cycle, Sine wave, Single Shot)	I_{FSM}	30			A
Maximum Forward Voltage at $I_F = 0.8$ A	V_F	2.5			V
Maximum Reverse Current at $V_R = V_{RM}$ $T_a = 25$ °C	I_R	10			μA
Maximum Reverse Current at $V_R = V_{RM}$ $T_a = 100$ °C	$I_{R(H)}$	200			μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	1.5			μs
Junction Temperature Range	T_J	- 40 to + 150			°C
Storage Temperature Range	T_{STG}	- 40 to + 150			°C

Notes :

(1) Reverse Recovery Test Conditions : $I_F = 10$ mA, $I_{RP} = 10$ mA.

RATING AND CHARACTERISTIC CURVES (ES1 - ES1Z)

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

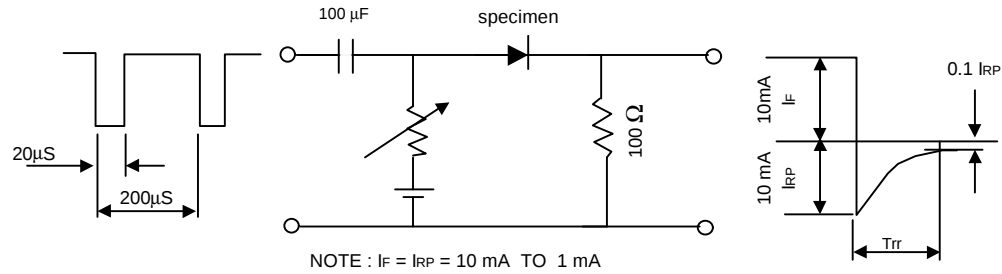


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

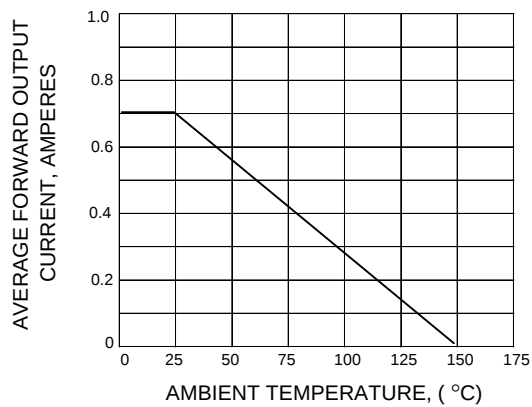


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

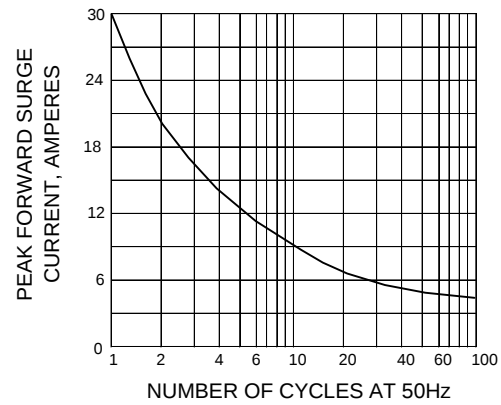


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

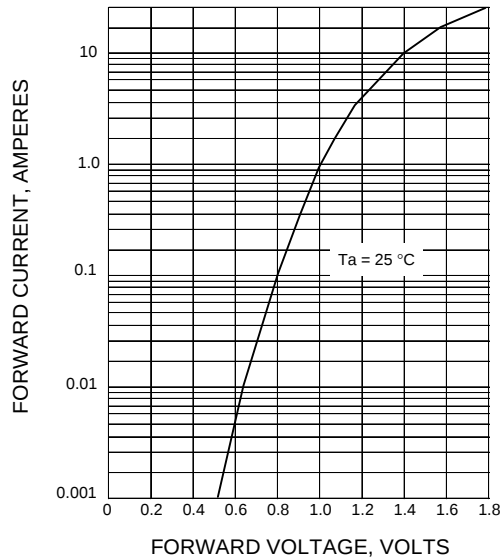


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

