

Ultra Fast Rectifier



RoHS
Compliant

Features:

- Ultra fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260°C, 40s
- 175°C operating junction temperature



Specifications:

Mechanical Data:

Cases	: JEDEC DO-41 molded plastic body
Terminals	: Plated axial leads, solderable per MIL STD-750, method 2026
Polarity	: Colour band denotes cathode end
Mounting Position	: Any
Weight	: 0.33 grams
Reverse Voltage	: 600 Volts
Forward Current	: 1 Ampere

Max. Ratings and Electrical Characteristics:

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

Characteristics	Symbol	Values	Units
Max. Recurrent Peak Reverse Voltage	V_{RRM}	600	V
Max. RMS Voltage	V_{RMS}	420	
Max. DC Blocking Voltage	V_{DC}	600	
Max. Average Forward Rectified Current (Square Wave Note 4) at $T_A = 80^\circ\text{C}$	$I_{(AV)}$	1	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Super imposed on Rated Load (JEDEC method)	I_{FSM}	35	
Max. Instantaneous Forward Voltage at 1A	V_F	1.35	V
Max. DC Reverse Current at $T_A = 25^\circ\text{C}$ Rated DC Blocking Voltage at $T_A = 150^\circ\text{C}$	I_R	5 50	μA
Max. Reverse Recovery Time	T_{RR}	60	nS
Typical Junction Capacitance	C_J	20	pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}		

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC
2. Thermal resistance junction to ambient
3. The typical data above is for reference only



Rating and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

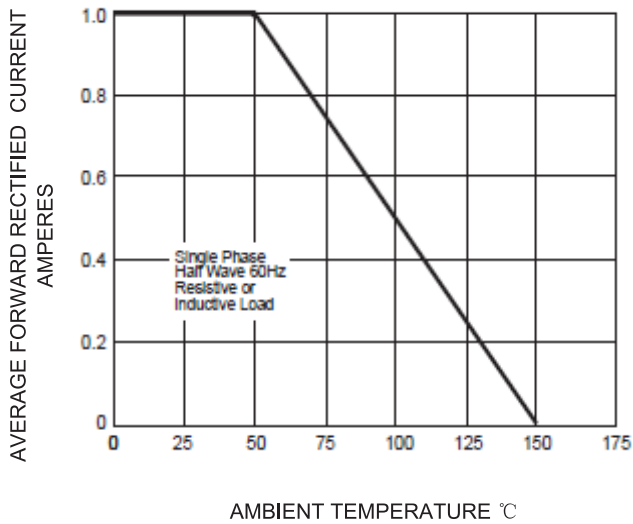


FIG. 2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

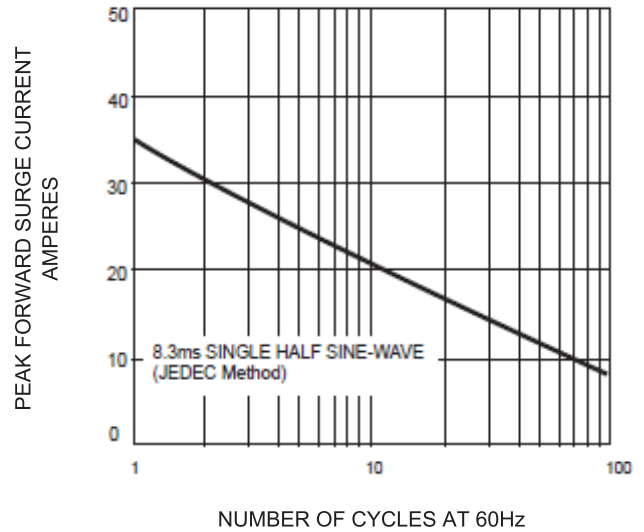


FIG.3-TYPICAL REVERSE CHARACTERISTICS

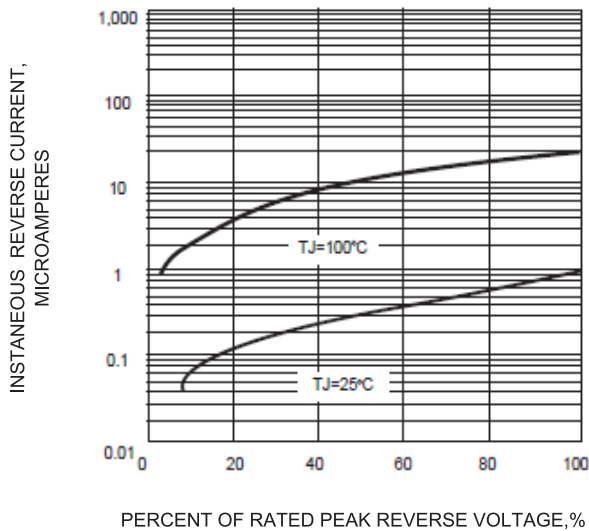
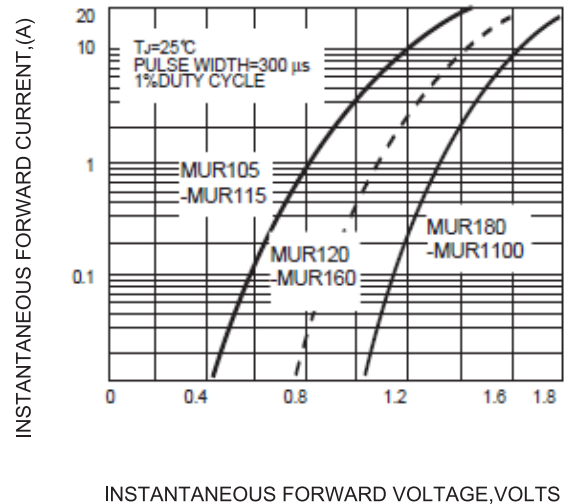


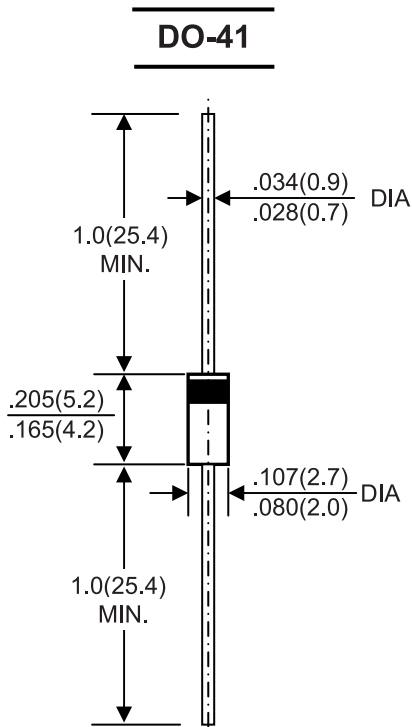
FIG.4-TYPICAL FORWARD CHARACTERISTICS



Ultra Fast Rectifier



Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Ultra Fast Rectifier, 1A, 600V	MUR160

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