



UF4001 THRU UF4007

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

ULTRA FAST RECTIFIERS

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

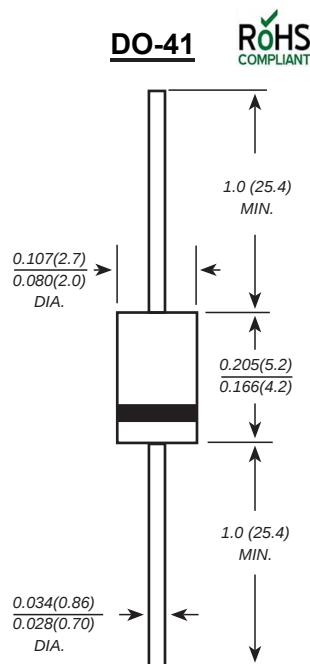
Case : JEDEC DO-41 Molded plastic body

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

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.012 ounce, 0.33 grams



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%.

parameter	SYMBOLS	HY UF4001	HY UF4002	HY UF4003	HY UF4005	HY UF4006	HY UF4007	UNITS
Marking code								
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	600	800	1000	V
Maximum average forward rectified current 0.375”(9.5mm) lead length at T _A =55°C	I _{AV}	1.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30.0						A
Maximum instantaneous forward voltage at 1.0A	V _F	1.0			1.7			V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0						μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	50			75			ns
Typical junction capacitance (NOTE 2)	C _J	15.0						pF
Typical thermal resistance (NOTE 3)	R _{θJA}	50.0						°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-50 to +150						°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. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



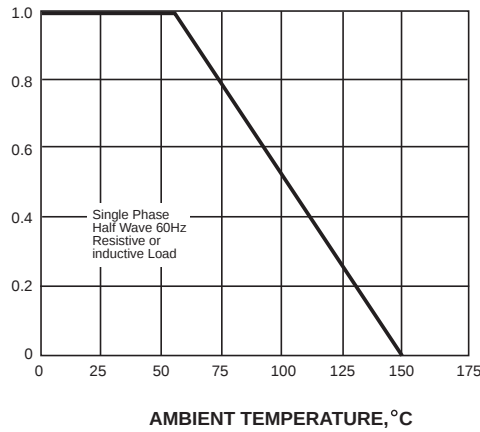
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Ratings And Characteristic Curves

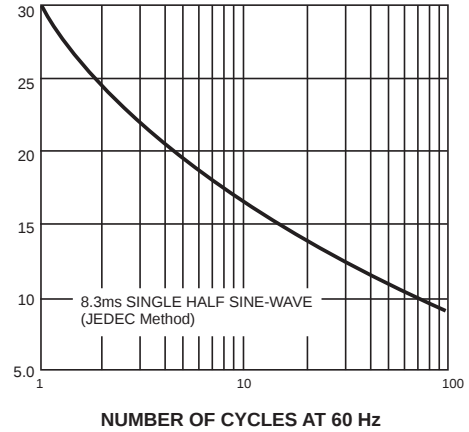
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



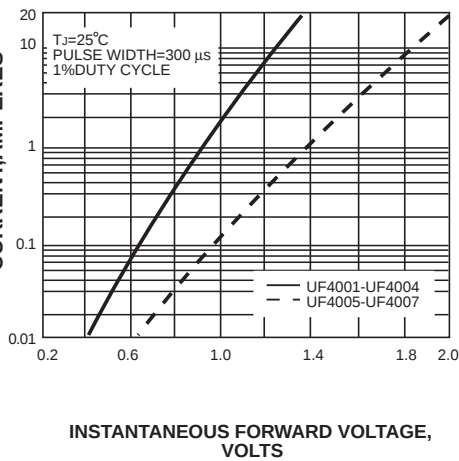
PEAK FORWARD SURGE CURRENT,
AMPERES

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



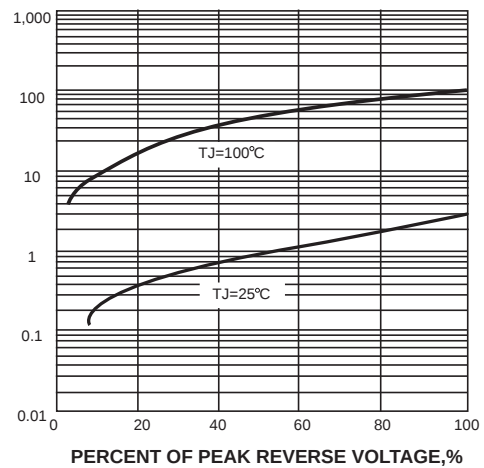
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



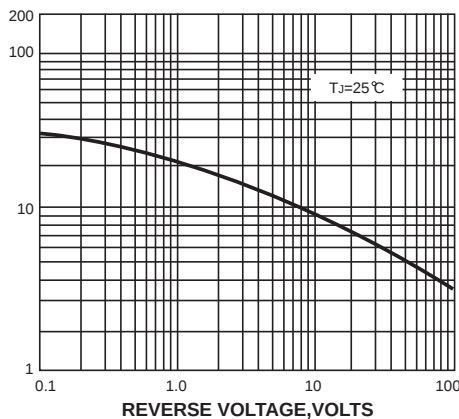
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



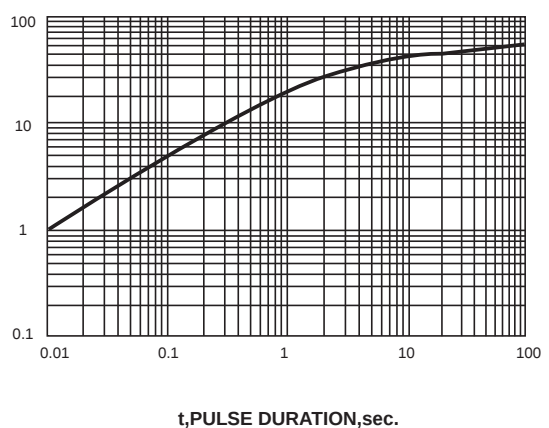
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.