

## ULTRA FAST RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts  
FORWARD CURRENT - 1.5 Amperes

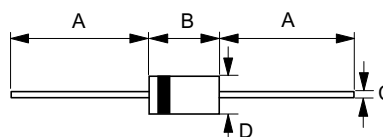
### FEATURES

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

### MECHANICAL DATA

- Case : JEDEC DO-41 molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.015 ounces, 0.4 grams
- Mounting position : Any

### DO-15



Dim.	DO-41	
	Min.	Max.
A	25.4	-
B	5.80	7.60
C	0.70 $\varnothing$	0.90 $\varnothing$
D	2.60 $\varnothing$	3.60 $\varnothing$

All Dimensions in millimeter

### 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, derate current by 20%

CHARACTERISTICS	SYMBOL	UF 1501	UF 1502	UF 1503	UF 1504	UF 1505	UF 1506	UF 1507	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T <sub>A</sub> =55°C	I <sub>(AV)</sub>	1.5							A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50							A
Maximum forward Voltage at 1.5A DC	V <sub>F</sub>	1.0		1.3		1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	I <sub>R</sub>	5 100							uA
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	50				75			ns
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	35				20			pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	25							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

NOTES : 1. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A.  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
3. Thermal Resistance Junction to Ambient.

**RATING AND CHARACTERISTIC CURVES**

FIG.1 - FORWARD CURRENT DERATING CURVE

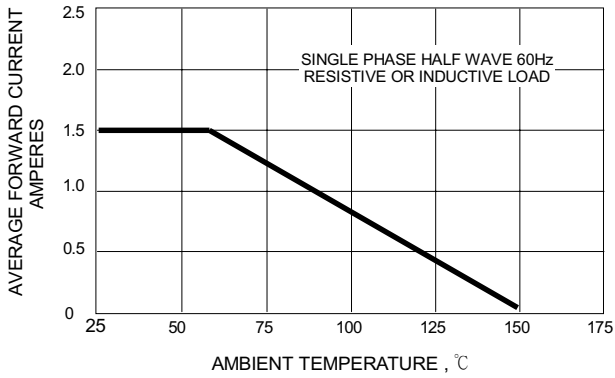


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

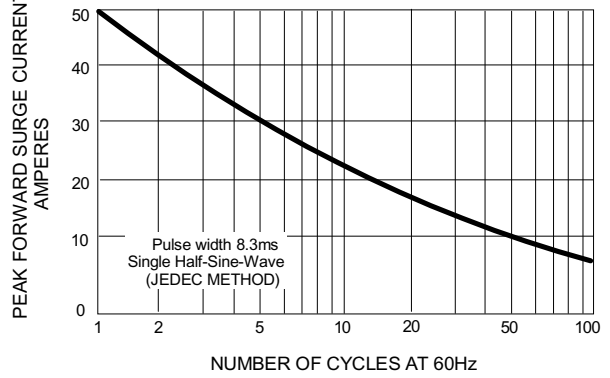


FIG.3 - TYPICAL JUNCTION CAPACITANCE

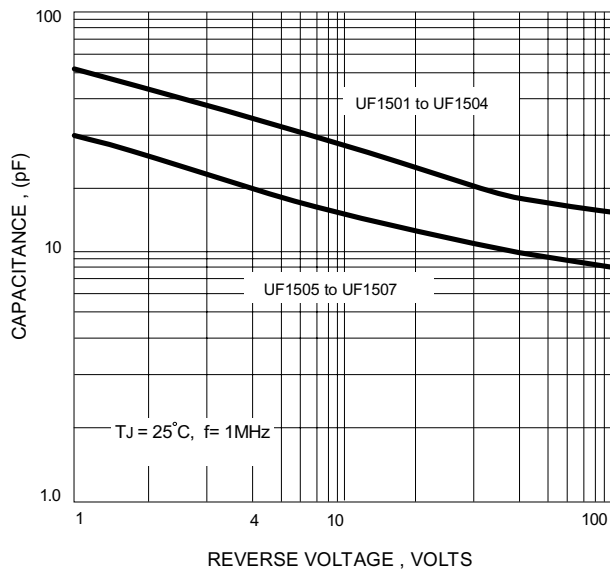


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

