

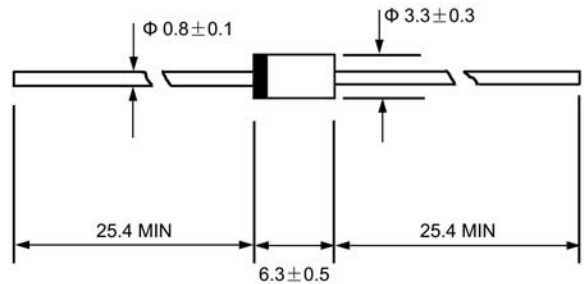
UGP20A-UGP20K

Ultra Fast Rectifier

VOLTAGE RANGE: 50 --- 800 V

CURRENT: 2.0

DO - 15



Dimensions in millimeters

Features

- ◇ Low cost
- ◇ Diffused junction
- ◇ low leakage current
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ Plastic package has underwriters laboratory flammability classification 94v-0

Mechanical Data

- ◇ Case: JEDEC DO-15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

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 by 20%.

		UGP 20A	UGP 20B	UGP 20D	UGP 20F	UGP 20G	UGP 20J	UGP 20K	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	65.0					60.0		A
Maximum instantaneous forward voltage @ 2.0A	V_F	0.95			1.25		1.70	2.20	V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 100.0							μA
Maximum reverse recovery time (Note1)	t_{rr}	35							ns
Typical junction capacitance (Note2)	C_J	22							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	40							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	- 55 ----- + 150							$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ----- + 150							$^\circ\text{C}$

NOTE: 1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

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Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

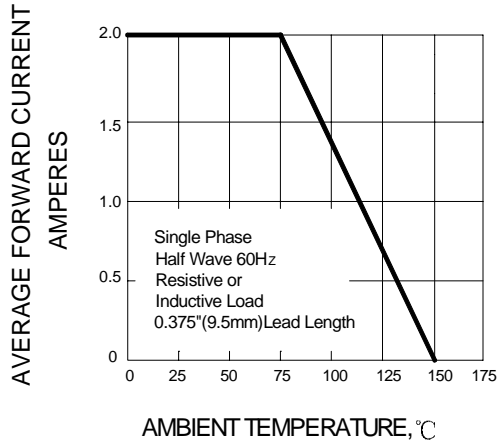


FIG.2 – PEAK FORWARD SURGE CURRENT

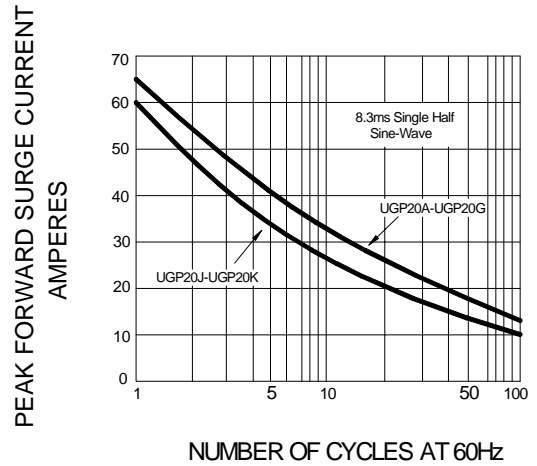


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

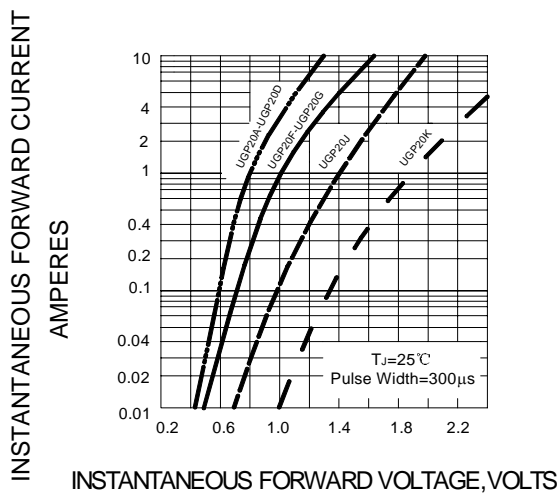


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

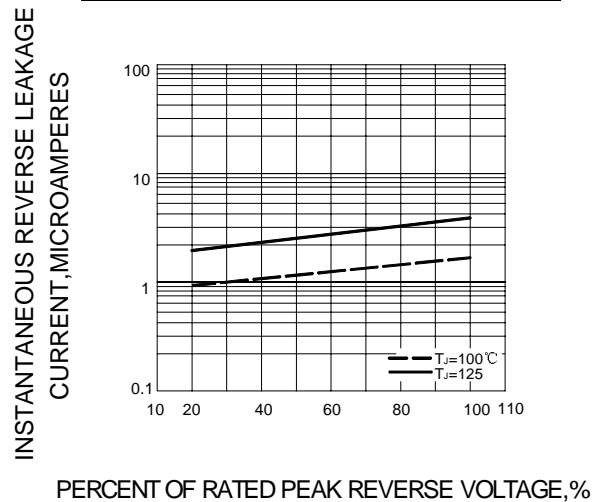


FIG.5 – TYPICAL JUNCTION CAPACITANCE

