

SUPER FAST RECTIFIERS

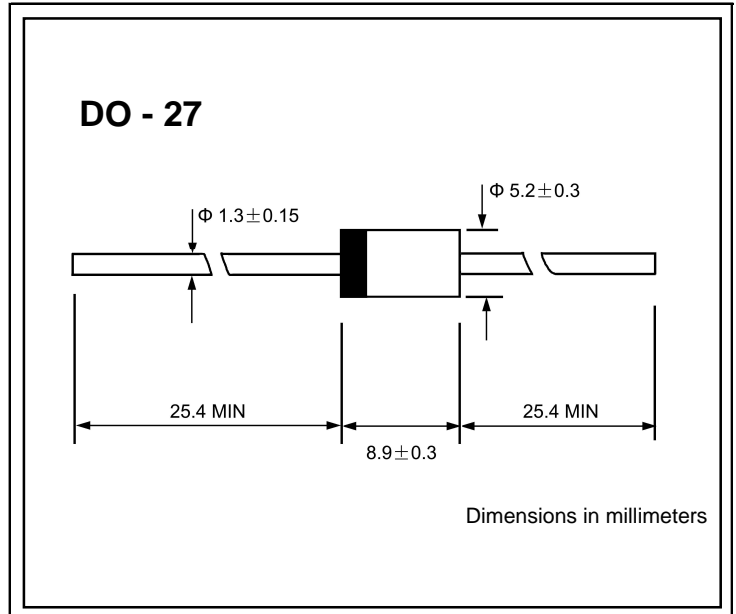
VOLTAGE RANGE: 50 --- 800 V
CURRENT: 3.0 A

FEATURES

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

MECHANICAL DATA

- ◇ Case: JEDEC DO-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 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%.

		UGP30 A	UGP30 B	UGP30 D	UGP30 F	UGP30 G	UGP30 J	UGP30 K	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, @ $T_A=75^\circ C$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	125.0					115.0		A
Maximum instantaneous forward voltage @ 3.0A	V_F	0.95			1.25		1.7	2.2	V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	5.0					120.0		μA
Maximum reverse recovery time (Note1)	t_{rr}	35					ns		
Typical junction capacitance (Note2)	C_J	35					pF		
Typical thermal resistance (Note3)	$R_{\theta JA}$	20					$^\circ C/W$		
Operating junction temperature range	T_J	- 55 ----- + 125							$^\circ C$
Storage temperature range	T_{STG}	- 55 ----- + 150							$^\circ C$

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

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

3. Thermal resistance junction to ambient

FIG.1 – FORWARD DERATING CURVE

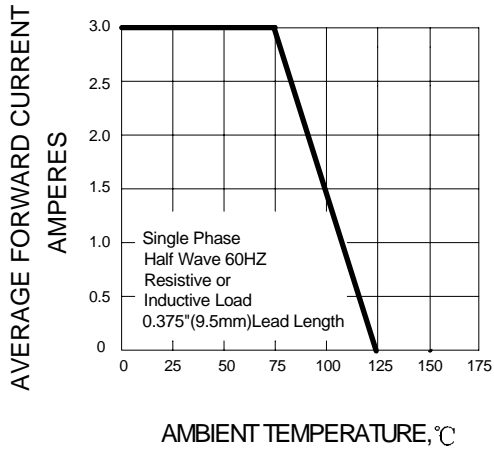


FIG.2 – PEAK FORWARD SURGE CURRENT

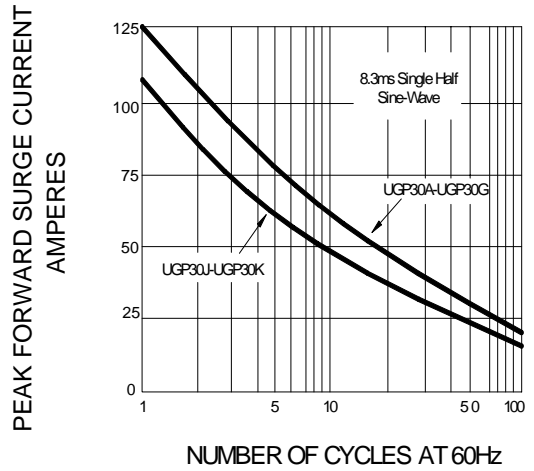


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

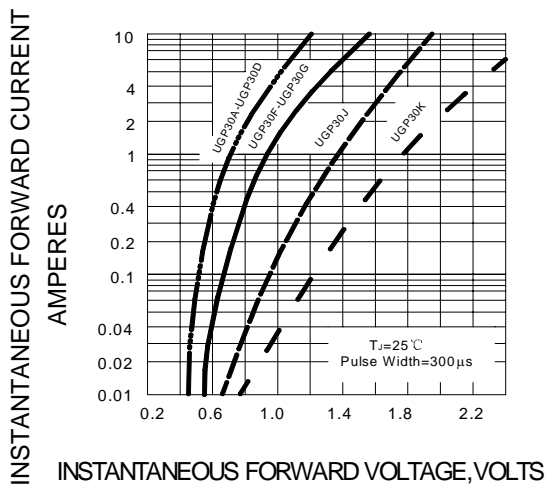


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

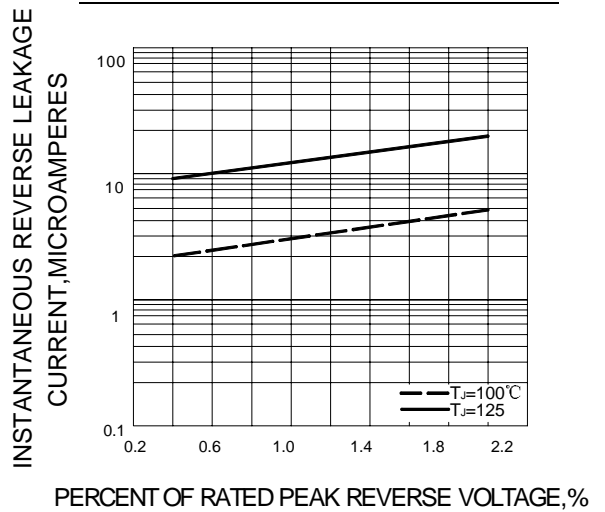


FIG.5 – TYPICAL JUNCTION CAPACITANCE

