



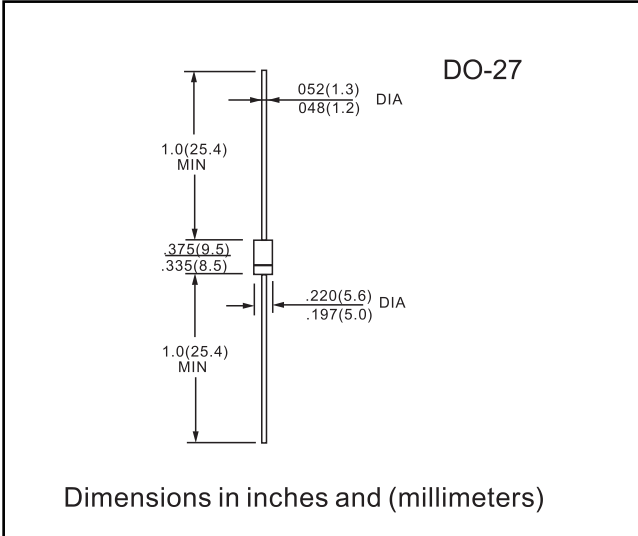
**TAYCHIPST**

**SUPER FAST RECTIFIERS**

**31DF6**  
**600V 3.0A**

**FEATURES**

- \* Low cost
- \* Diffused junction
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* Easily cleaned with alcohol, isopropanol and
- \* The plastic material carries U/L recognition 94V-0



**MECHANICAL DATA**

- \* Case: JEDEC DO-27, molded plastic
- \* Terminals: Axial lead, solderable per MIL-STD202, Method 208
- \* Polarity: Color band denotes cathode
- \* Weight: 0.041 ounces, 1.15 grams
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

		31DF6	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	600	V
Maximum RMS voltage	$V_{RMS}$	420	V
Maximum DC blocking voltage	$V_{DC}$	600	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 @ $T_J=125^{\circ}C$	$I_{FSM}$	45.0	A
Maximum instantaneous forward voltage @ 3.0A	$V_F$	1.7	V
Maximum reverse current @ $T_A=25^{\circ}C$ at rated DC blocking voltage @ $T_A=100^{\circ}C$	$I_R$	20.0 100.0	$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	35	ns
Typical junction capacitance (Note2)	$C_J$	90	pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	34	$^{\circ}C/W$
Operating junction temperature range	$T_J$	- 55 ----- + 150	$^{\circ}C$
Storage temperature range	$T_{STG}$	- 55 ----- + 150	$^{\circ}C$

NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .  
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 3. Thermal resistance from junction to ambient.



RATINGS AND CHARACTERISTIC CURVES 31DF6

FIG.1 – FORWARD DERATING CURVE

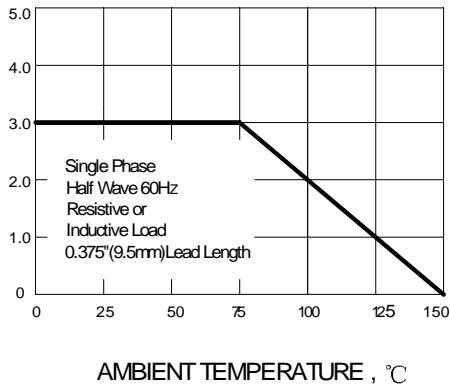
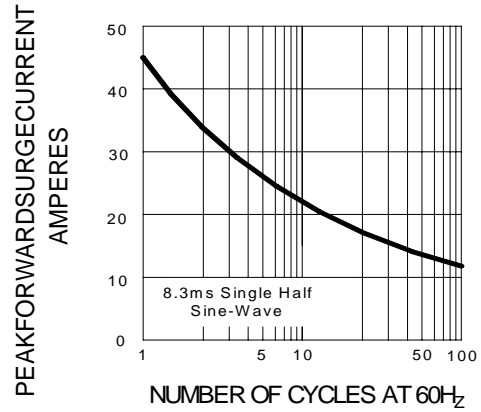


FIG.2 – PEAK FORWARD SURGE CURRENT



INSTANTANEOUS FORWARD CURRENT ,A

FIG.3 – TYPICAL FORWARD CHARACTERISTIC

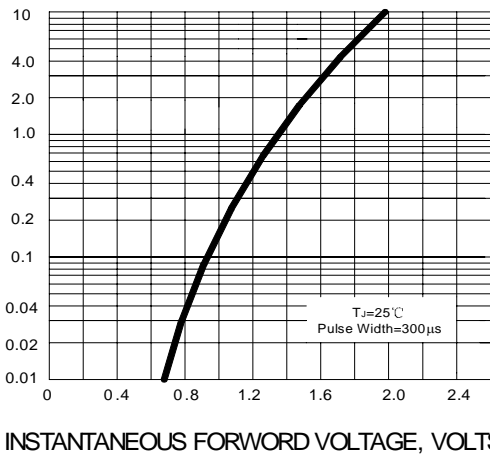


FIG.4-TYPICAL JUNCTION CAPACITANCE

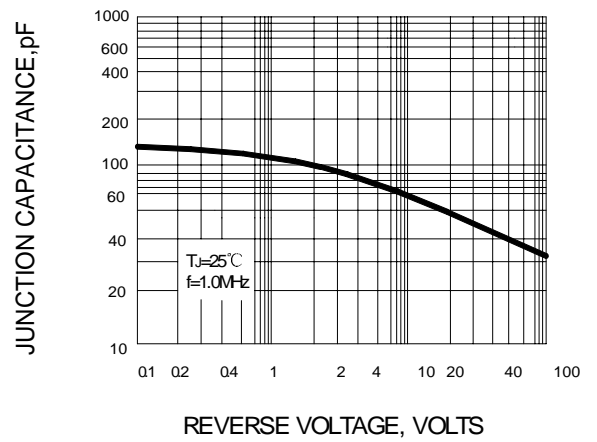


FIG.5-AVERAGE FORWARD POWER DISSIPATION

