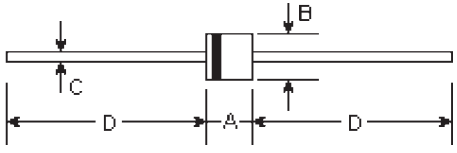
6A05 THRU 6A10

GENERAL PURPOSE PLASTIC RECTIFIER
Reverse Voltage - 50 to 1000 Volts
Forward Current - 6.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High forward current capability
- Construction utilizes void-free molded plastic technique
- High surge current capability
- High temperature soldering guaranteed: 250℃/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension

R-6



Mechanical Data

- **Case:** Void-free molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.074 ounce, 2.1 grams

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.339	0.358	8.6	9.1	
B	0.339	0.358	8.6	9.1	ϕ
C	0.047	0.052	1.2	1.3	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

	Symbols	6A05	6A1	6A2	6A4	6A6	6A8	6A10	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at T_A=60℃, 0.375" (9.5mm) lead length (Fig 1) T_L^A=60℃, 0.125" (3.18mm) lead length (Fig 2)	$I_{(AV)}$	6.0 22.0							Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	400.0							Amps
Maximum instantaneous forward voltage at 6.0A 100A	V_F	0.90 1.30						1.0 1.4	Volts
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	10.0 1.0							μ A mA
Typical reverse recovery time (Note 1)	T_{rr}	2.5							μ S
Typical junction capacitance (Note 2)	C_J	150.0							ρ F
Typical thermal resistance (Note 3)	$R_{\omega JA}$ $R_{\omega JL}$	20.0 4.0							℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							℃

Notes:

(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 1.1X1.1" (30X30mm) copper pads

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - MAXIMUM FORWARD CURRENT DERATING CURRENT

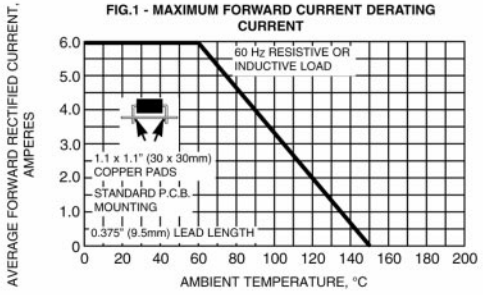


FIG. 2 - MAXIMUM FORWARD CURRENT DERATING CURVE

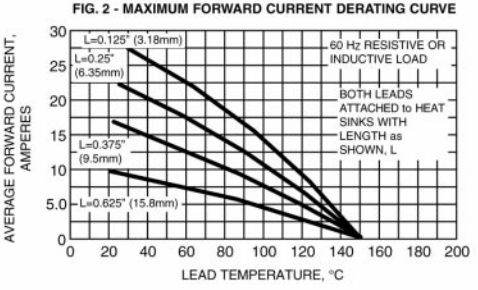


FIG. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

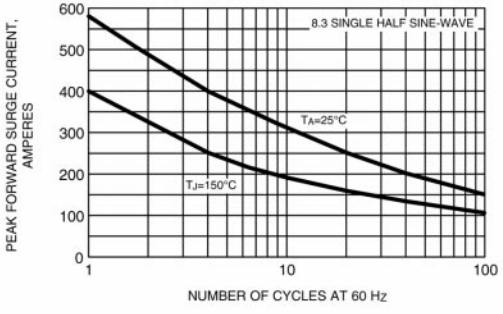


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

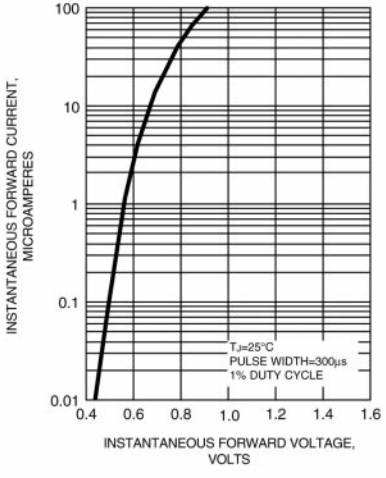


FIG. 5 - TYPICAL REVERSE CHARACTERISITIC

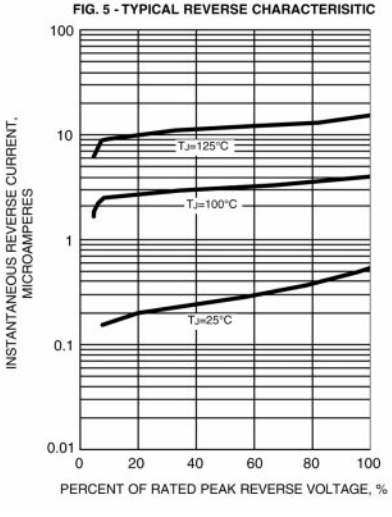


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE