1N4942 THRU 1N4948

FAST SWITCHING
PLASTIC RECTIFIER

VOLTAGE:50 TO 1000V   **CURRENT: 1.0A**
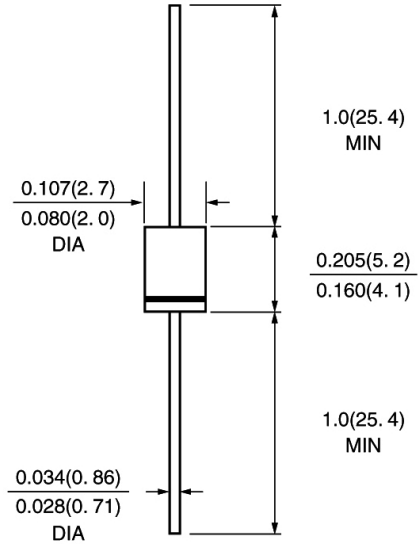
GULF SEMI

FEATURE

Molded case feature for auto insertion
High current capability
Low leakage current
High surge capability
High temperature soldering guaranteed
250°C/10sec/0.375"lead length at 5 lbs tension
Fast switching for high efficiency

MECHANICAL DATA

Terminal:Plated axial leads solderable per
MIL-STD 202E, method 208C
Case:Molded with UL-94 Class V-0 recognized Flame
Retardant Epoxy
Polarity:color band denotes cathode
Mounting position:any

DO-41\DO-204AL

1.0(25. 4) MIN

0.107(2. 7)
0.080(2. 0)
DIA

0.205(5. 2)
0.160(4. 1)

1.0(25. 4) MIN

0.034(0. 86)
0.028(0. 71)
DIA

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	1N 4942	1N 4944	1N 4946	1N 4947	1N 4948	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	200	400	600	800	1000	V
Maximum RMS Voltage	Vrms	140	280	420	560	700	V
Maximum DC blocking Voltage	Vdc	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8"lead length at Ta =75°C	If(av)	1.0					A
Peak Forward Surge Current 8.3ms single Half sine-wave superimposed on rated load	Ifsm	25.0					A
Maximum Forward Voltage at rated Forward Current and 25°C	Vf	1.3					V
* Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage	Ir	5.0					μA
Maximum Reverse Recovery Time (Note 1)	Trr	150		250		500	nS
Typical Junction Capacitance (Note 2)	Cj	15.0					pF
Typical Thermal Resistance (Note 3)	R(ja)	50.0					°C/W
Storage and Operating Junction Temperature	Tstg,Tj	-50 to +150					°C

Note:

1. Reverse Recovery Condition If **=**0.5A, Ir =1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 0.375"lead length, P.C. Board Mounted[1]

FIG. 1 - FORWARD CURRENT DERATING CURVE

RESISTIVE OR
INDUCTIVE LOAD
0.375" (9.5mm)
LEAD LENGTH
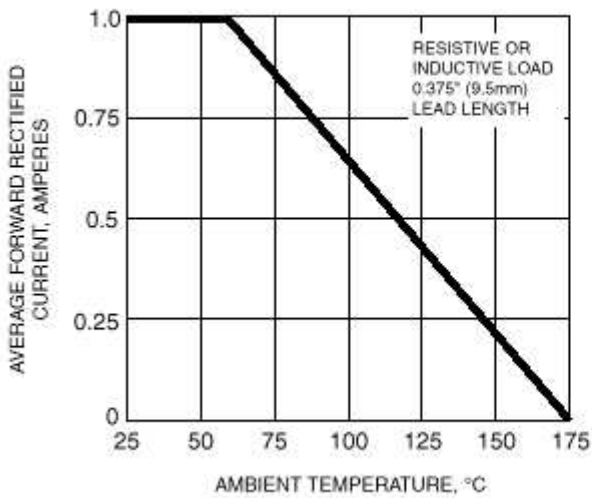
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT**

$T_J = T_J$ max.
8.3ms SINGLE HALF SINE-WAVE
(JEDEC Method)
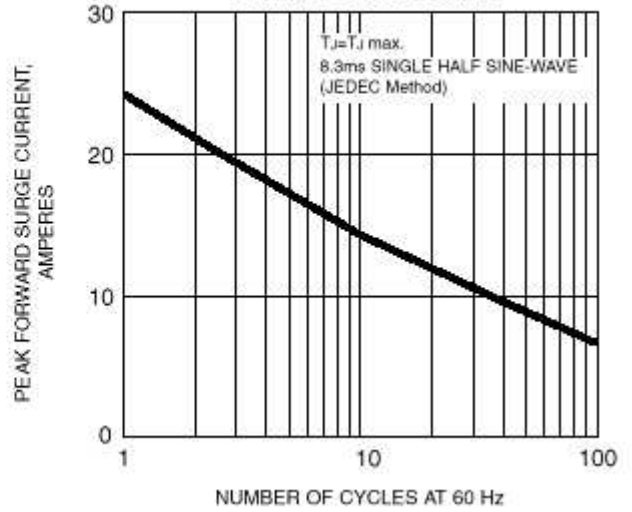
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS**

$T_J = 25°C$
PULSE WIDTH=300μs
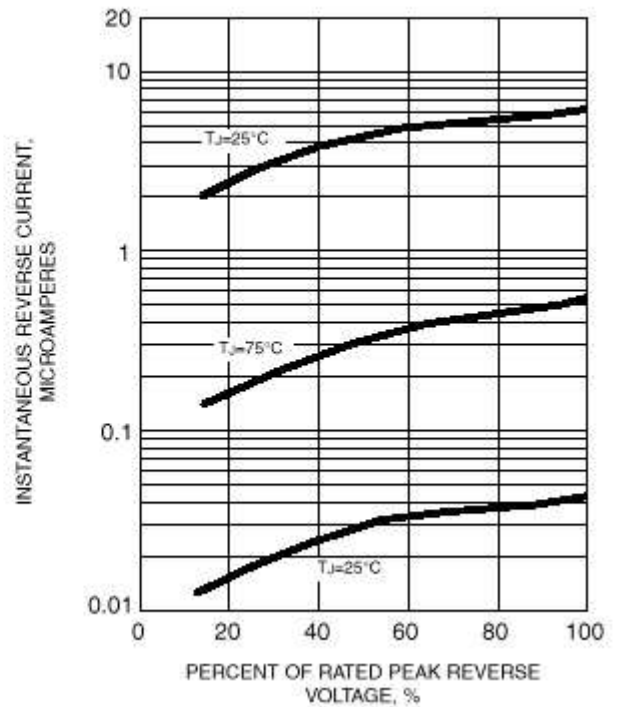1% DUTY CYCLE
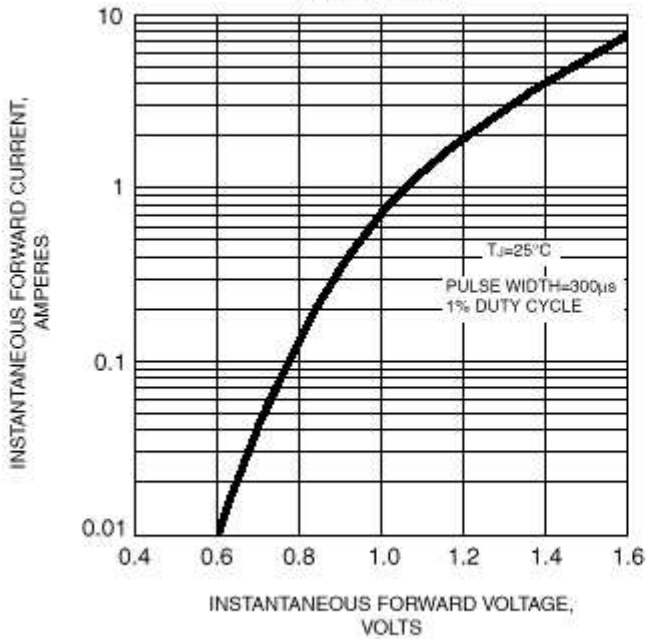
FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

$T_J = 25°C$

$T_J = 75°C$

$T_J = 25°C$

FIG. 5 - TYPICAL JUNCTION CAPACITANCE

$T_J = 25°C$
f=1.0 MHz
Vsig=50mVp-p