FR1601 THRU FR1607

GLASS PASSIVATED FAST RECOVERY RECTIFIER

康比電子
HORNBY ELECTRONIC

REVERSE VOLTAGE: **50 to 1000 VOLTS**

FORWARD CURRENT: **16.0 AMPERE**

FEATURES

· Low forward voltage drop

· High current capability

· High capability

· High surge current capability

TO-220A

Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic, TO-220A

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202

method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60H_Z, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	FR1601	FR1602	FR1603	FR1604	FR1605	FR1606	FR1607	Units
Maximum Recurrent 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 See Fig. 2	$I_{(AV)}$	16.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	250							Amp
Maximum Forward Voltage at 16.0A DC and 25℃	V_F	1.3							Volts
Maximum Reverse Current at T_C=25℃ at Rated DC Blocking Voltage T_C=125℃	I_R	5.0 100							uAmp
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	2.5							℃/W
Maximum Reverse Recovery Time (Note 2)	T_{RR}	150				250	500		nS
Operating and Storage Temperature Range	T_J，Tstg	-55 to +150							℃

NOTES:

1- Thermal Resistance from Junction to Case Mounted on Heatsink.

2- Reverse Recovery Test Conditions：I_F=.5A，I_R=1A，I_{RR}=.25A.

RATINGS AND CHARACTERISTIC CURVES

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
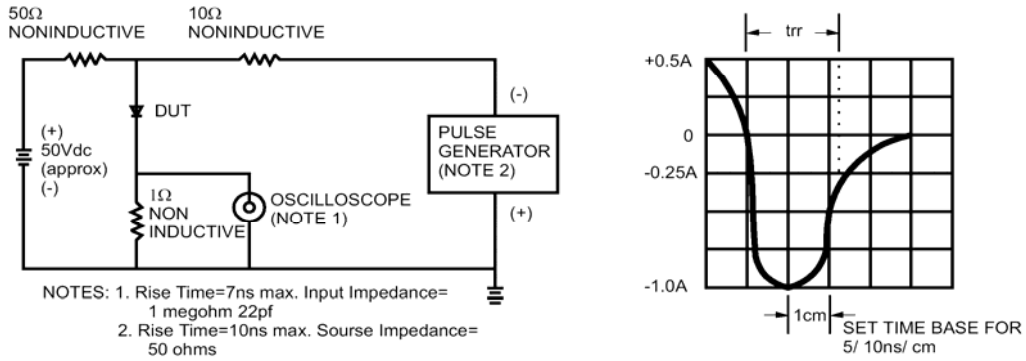2. Rise Time=10ns max. Sourse Impedance= 50 ohms

SET TIME BASE FOR 5/ 10ns/ cm

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE
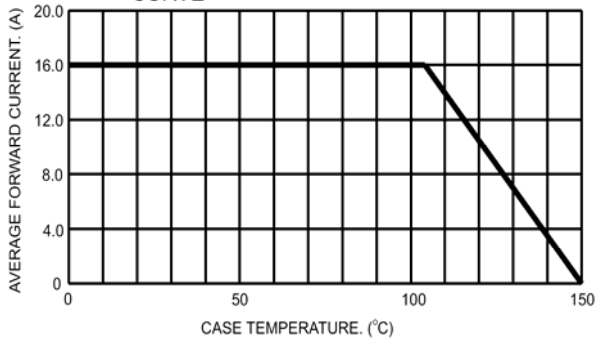
FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

8.3ms Single Half Sine Wave JEDEC Method
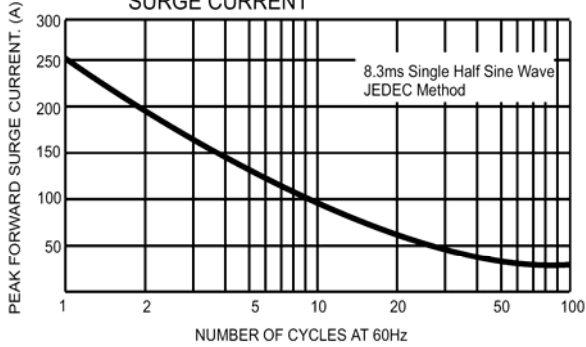
FIG.4- TYPICAL JUNCTION CAPACITANCE

Tj=25°C
f=1.0MHz
Vsig=50mVp-p
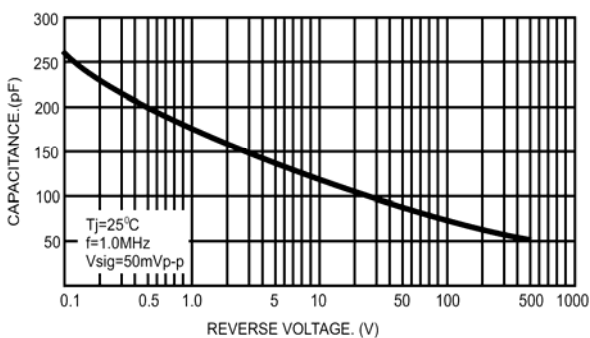
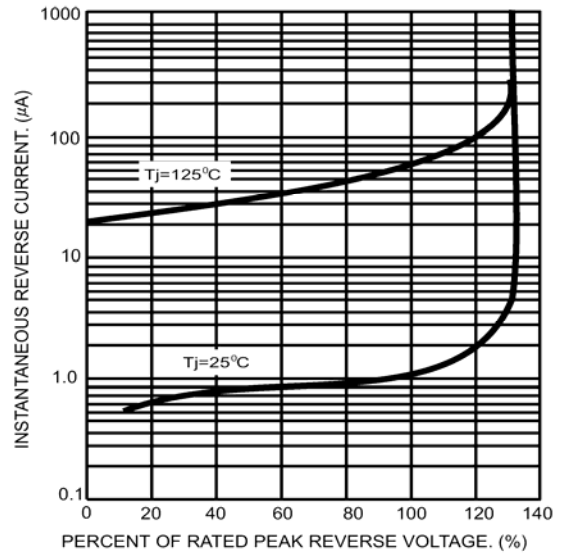FIG.5- TYPICAL REVERSE CHARACTERISTICS

Tj=125°C

Tj=25°C

FIG.6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

Tj=25°C
Pulse Width=300 s
1% Duty Cycle