

Kingtronics®**FR301 THRU
FR307****FAST RECOVERY RECTIFIERS****REVERSE VOLTAGE 50 to 1000 Volts****FORWARD CURRENT 3.0 Ampere****FEATURES**

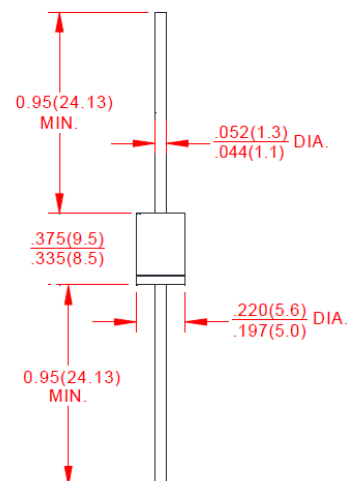
Low forward voltage drop
 Low leakage current
 High forward surge capability
 High reliability
 High temperature soldering guaranteed
 260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

Case: Transfer molded plastic
 Epoxy: UL94V-0 rate flame retardant
 Polarity: Color band denotes cathode end
 Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
 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 current by 20%**

Dimensions in inches and (millimeters)

PARAMETER		SYMBOL	FR301	FR302	FR303	FR304	FR305	FR306	FR307	UNIT
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 =55°C		I _(AV)	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	150							Amps
Maximum instantaneous forward voltage at 3.0A		V _F	1.2							VOLTS
Maximum DC Reverse Current at Rated DC blocking voltage	T _A =25°C	I _R	5.0							μA
	T _A =100°C		100							
Maximum reverse recovery time (NOTE 1)		T _{RR}	150				250	500		ns
Typical Junction Capacitance (Note 2)		C _J	60							pF
Typical Thermal Resistance (Note 3)		R _{θJA}	40							°C/W
Operating junction and storage temperature Range		T _J ,T _{STG}	-55 to +150							°C

1- Reverse recovery condition $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$.

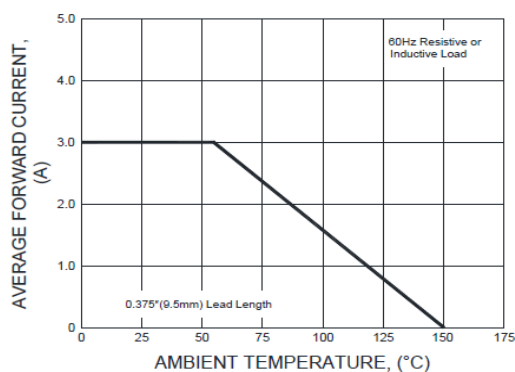
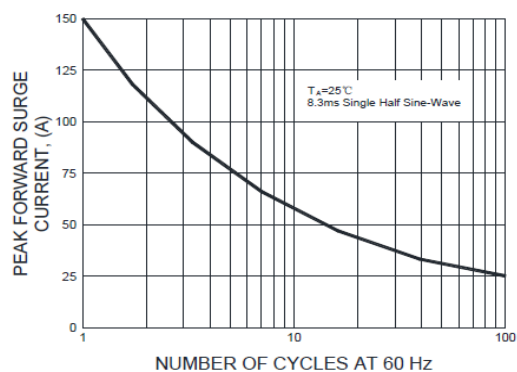
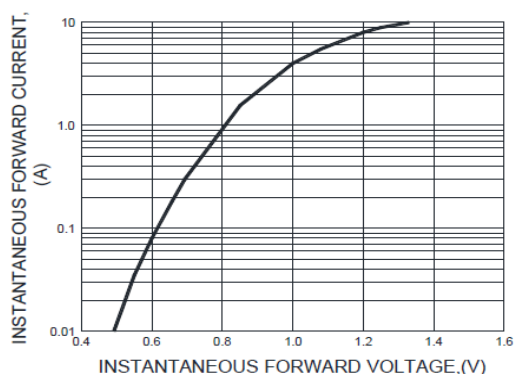
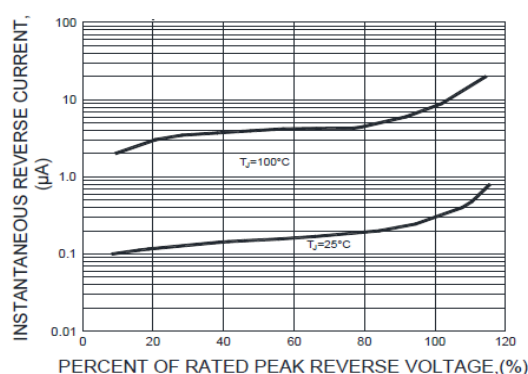
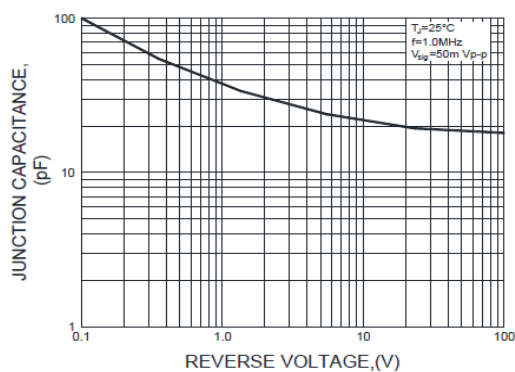
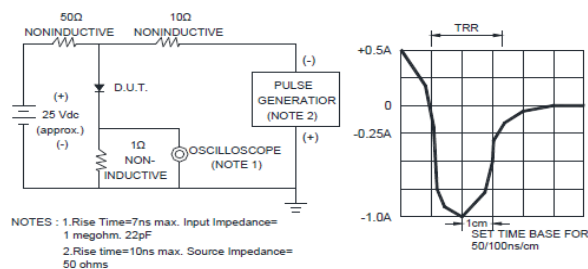
2- Measured at 1 MHZ and applied reverse voltage of 4.0 VDC.

3- Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted.

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Kingtronics®**FR301 THRU
FR307****RATINGS AND CHARACTERISTIC CURVES****FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE****FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT****FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS****FIG.3-TYPICAL REVERSE CHARACTERISTICS****FIG.5-TYPICAL JUNCTION CAPACITANCE****FIG.6-TEST CIRCUIT DIAGRAM AND
FORWARD SURGE CURRENT**

Note: Specifications are subject to change without notice.

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