FKBP200 - FKBP210

FAST RECOVERY BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts
Io : 2.0 Amperes

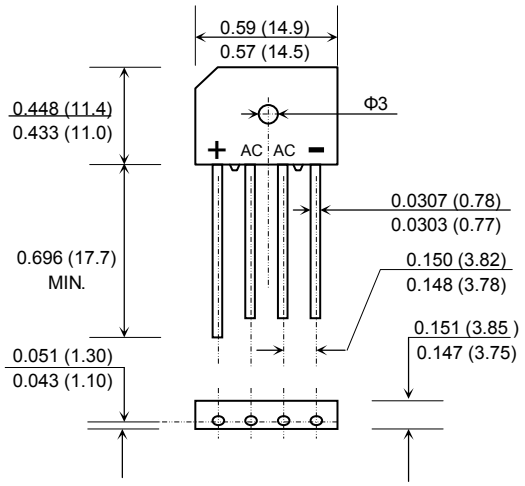
FEATURES :

* High case dielectric strength of 2000 VDC
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Fast switching for high efficiency
* Ideal for printed circuit board
* Pb / RoHS Free

MECHANICAL DATA :

* Case : Molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Polarity symbols marked on case
* Mounting position : Any
* Weight : 3.4 grams

KBP



Dimensions in inches and (millimeter)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	FKBP 200	FKBP 201	FKBP 202	FKBP 204	FKBP 206	FKBP 208	FKBP 210	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current Tc = 50 °C	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	35							A
Current Squared Time at t < 8.3 ms.	I^2t	10							A^2S
Maximum Forward Voltage drop per Diode at I_F = 1.0 A	V_F	1.3							V
Maximum DC Reverse Current Ta = 25 °C	I_R	10							µA
at Rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	500							µA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		ns
Typical Thermal Resistance (Note 2)	RθJA	30							°C/W
Operating Junction Temperature Range	T_J	- 50 to + 150							°C
Storage Temperature Range	T_{STG}	- 50 to + 150							°C

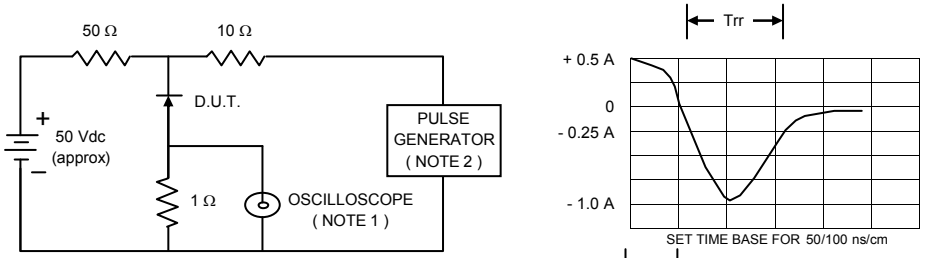
Notes :

1) Measured with IF = 0.5 Amp., IR = 1 Amp., Irr = 0.25 Amp.

2) Thermal resistance from Junction to Ambient on P.C. Board with, 0.47" X 0.47" (12 mm. x 12 mm.) Cu. pads.

RATING AND CHARACTERISTIC CURVES (FKBP200 - FKBP210)

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



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

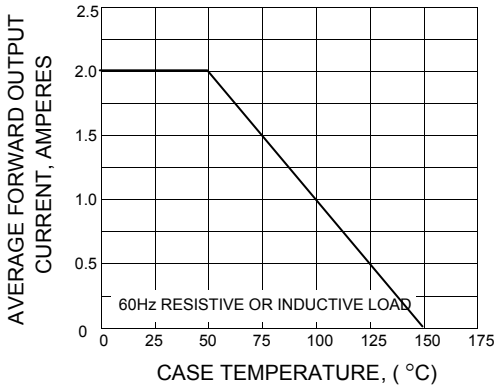


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

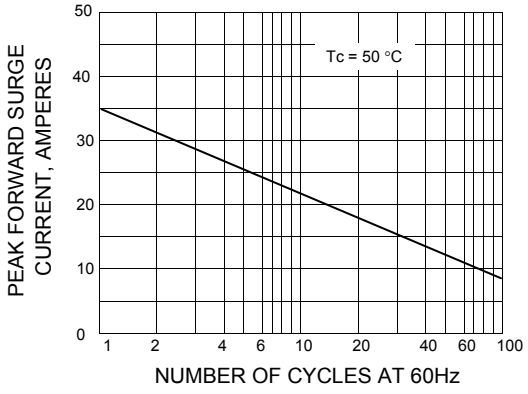


FIG.4 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

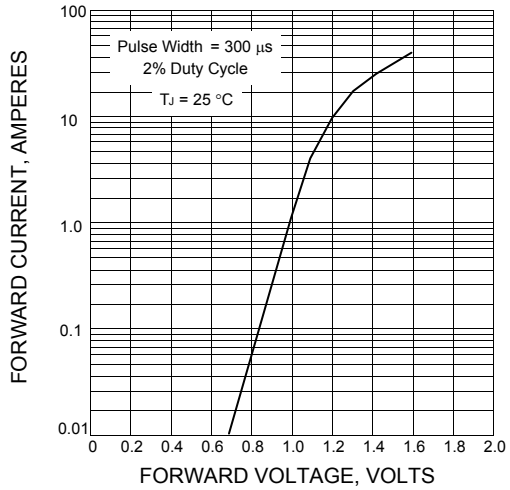


FIG.5 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

