GK GOODWORK
固得沃克

Professional semiconductor
device manufacturer

GBU4005 THRU GBU410
SINGLE PHASE 4.0 AMP BRIDGE RECTIFIERS

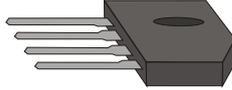## VOLTAGE RANGE
50 to 1000 Volts
CURRENT
4.0 Amperes

FEATURES

* Ideal for printed circuit board

* Low forward voltage

* Low leakage current
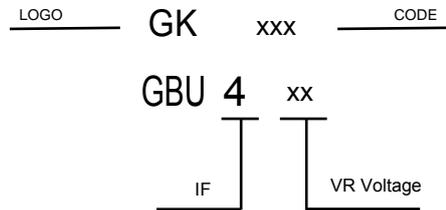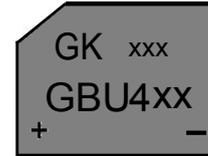
* Polarity: marked on body

* Mounting position: Any

GK xxx
GBU4xx
+   −

LOGO ——— GK xxx ——— CODE

GBU 4 xx

IF   VR Voltage

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25℃ ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	GBU4005	GBU401	GBU402	GBU404	GBU406	GBU408	GBU410	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current				4.0				A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)				120				A
Maximum Forward Voltage Drop per Bridge Element at 4.0A D.C.				1.1				V
Maximum DC Reverse Current Ta=25℃				10				μA
at Rated DC Blocking Voltage Ta=100℃				500				μA
Operating Temperature Range, T_J				-65 — +150				℃
Storage Temperature Range, T_{STG}				-65 — +150				℃

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

Single Phase
Half Wave 60Hz
Resistive Or Inductive Load

AVERAGE FORWARD CURRENT,(A)
CASE TEMPERATURE,(°C)
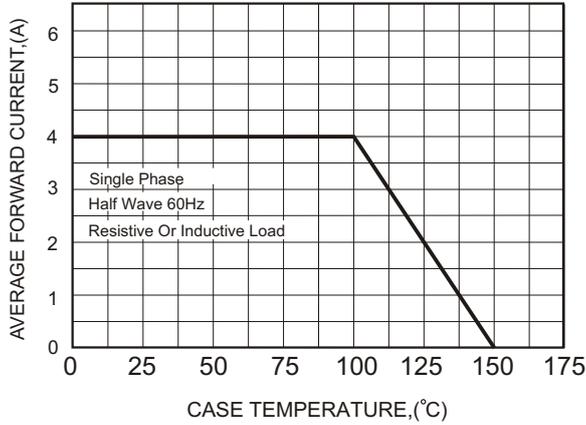
FIG.2-TYPICAL FORWARD CHARACTERISTICS

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

INSTANTANEOUS FORWARD CURRENT,(A)
FORWARD VOLTAGE,(V)
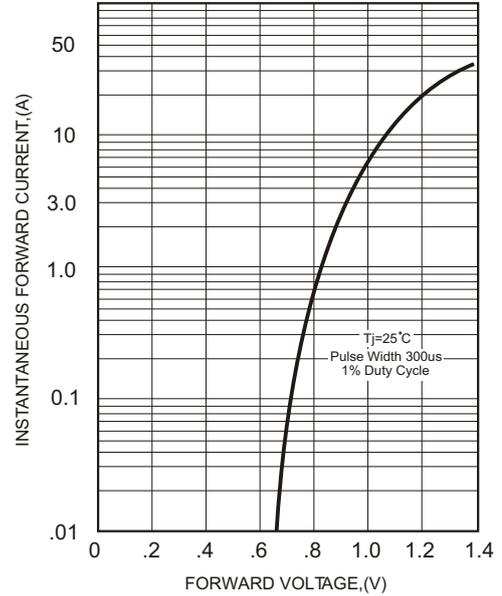
FIG.3 - TYPICAL REVERSE CHARACTERISTICS

Tj=100°C
Tj=25°C

REVERSE LEAKAGE CURRENT, (µA)
PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)
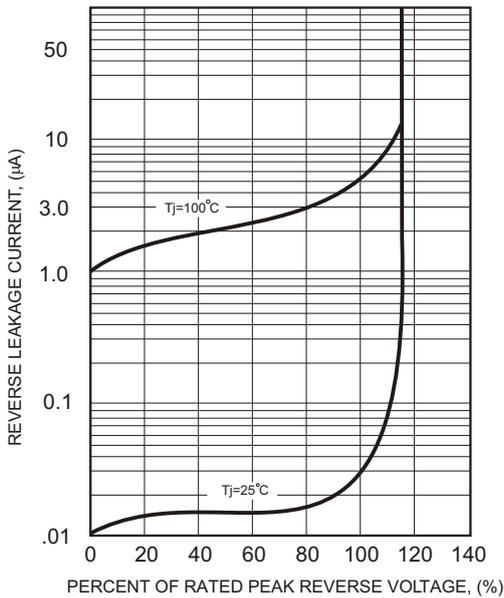
FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Tj=25°C
8.3ms Single Half
Sine Wave
JEDEC method

PEAK FORWARD SURGE CURRENT,(A)
NUMBER OF CYCLES AT 60Hz
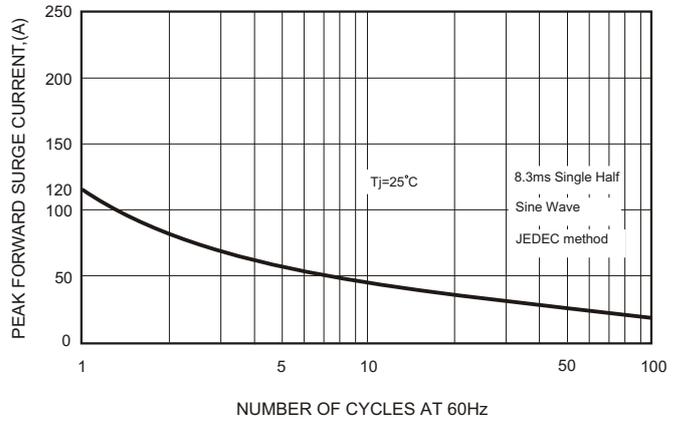
Soldering parameters

Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition

Package Dimensions & Suggested Pad Layout

GBU

Dimensions in inches and (millimeters)