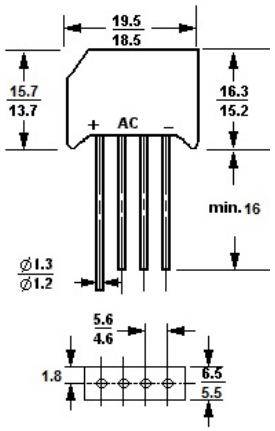
RS401S THRU RS407S

Single-phase Bridge Rectifier
Reverse Voltage - 50 to 1000 V
Forward Current - 4 A

KBL



Dimensions in mm

Features
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current

Mechanical Data
- Case: KBL
- Polarity: marked on body
- Mounting Position: Any

Maximum Ratings and Electrical Characteristics
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbols	RS401S	RS402S	RS403S	RS404S	RS405S	RS406S	RS407S	Units
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 Rectified Current at T_A = 40 °C	$I_{F(AV)}$	4							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150							A
Current Squared Time at 1 ms ≤ t ≤ 8.3 ms	I^2t	93							A^2S
Maximum Forward Voltage Drop per Bridge Element at 4 A	V_F	1.05							V
Maximum Reverse Current at Rated DC Blocking Voltage per Leg	I_R	10							μA
Typical Thermal Resistance, Junction to Ambient [1]	$R_{\theta JA}$	13							°C/W
Typical Thermal Resistance, Junction to Lead [2]	$R_{\theta JL}$	2.4							°C/W
Operating Temperature Range	T_j	- 55 to + 150							°C
Storage Temperature Range	T_{stg}	- 55 to + 150							°C

[1] Thermal resistance from junction to ambient with units mounted on 3 x 3 x 0.11″ thick(7.5 x 7.5 x 0.3 cm) aluminum plate.
[2] Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375″(9.5 mm)lead length and 0.5 x 0.5″(12 x 12 mm) copper pads.

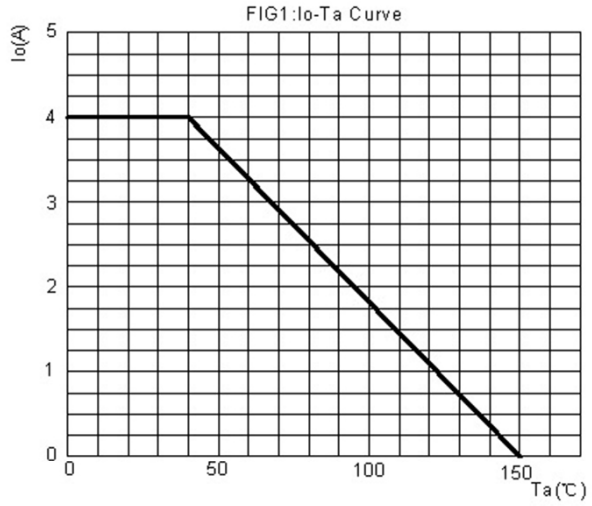


FIG1:Io-Ta Curve
Io(A)
5
4
3
2
1
0
0
50
100
150
Ta(℃)

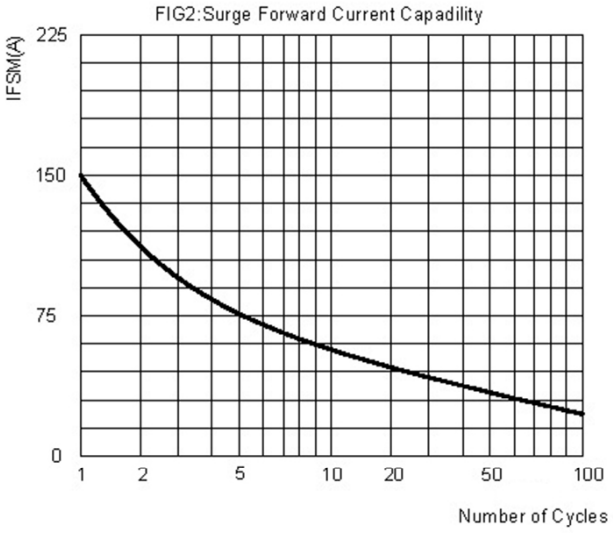


FIG2:Surge Forward Current Capadility
IFSM(A)
225
150
75
0
1
2
5
10
20
50
100
Number of Cycles

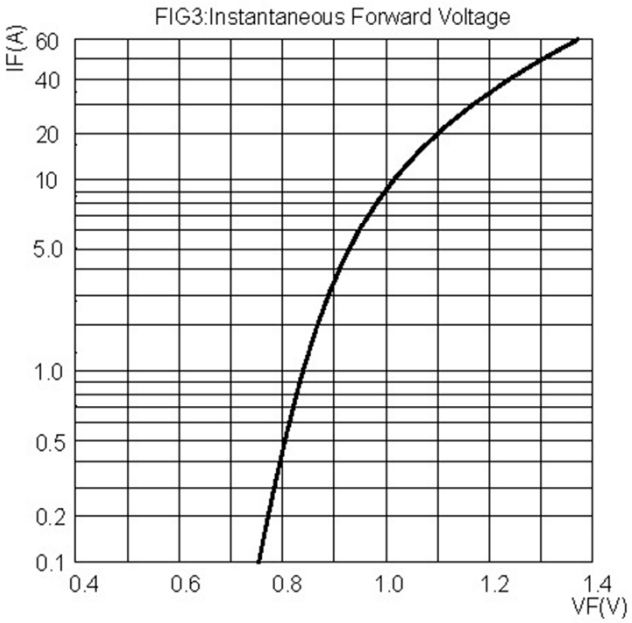


FIG3:Instantaneous Forward Voltage
IF(A)
60
40
20
10
5.0
1.0
0.5
0.2
0.1
0.4
0.6
0.8
1.0
1.2
1.4
VF(V)

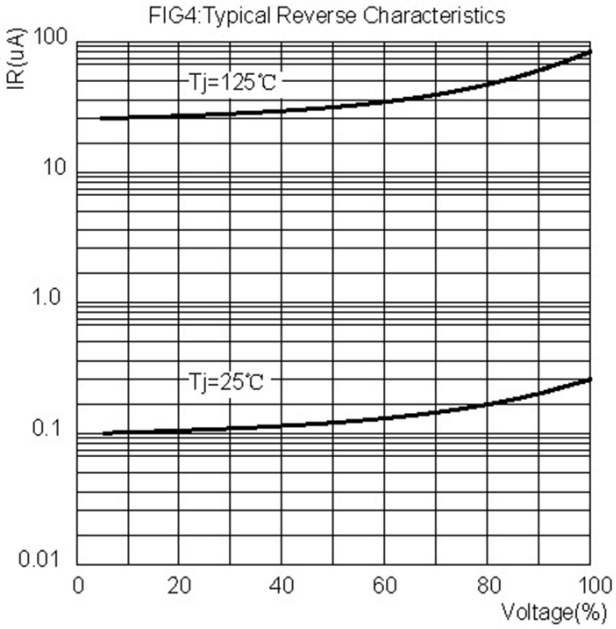


FIG4:Typical Reverse Characteristics
IR(uA)
100
10
1.0
0.1
0.01
Tj=125℃
Tj=25℃
0
20
40
60
80
100
Voltage(%)