DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

MBK12S THRU MBK120S

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIER

VOLTAGE RANGE - 20 to 200 Volts *CURRENT - 1.0 Ampere*

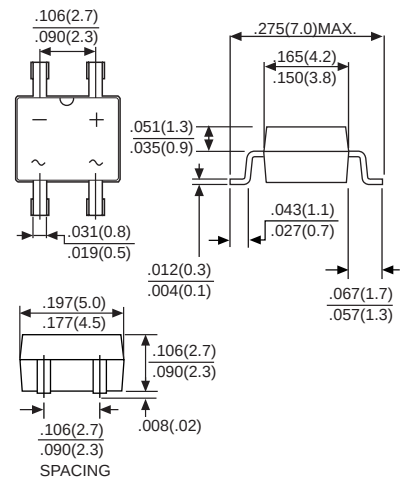
FEATURES

*High surge current capability
* Ideal for printed circuit board

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: MIL-STD-202E, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any
* Weight: 0.1 gram

MBS



Dimensions in inches and (millimeters)

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%.

		SYMBOL	MBK12S	MBK14S	MBK16S	MBK18S	MBK110S	MBK115S	MBK120S	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	20	40	60	80	100	150	200	Volts
Maximum RMS Bridge Input Voltage		V_{RMS}	14	28	42	56	70	105	140	Volts
Maximum DC Blocking Voltage		V_{DC}	20	40	60	80	100	150	200	Volts
Maximum Average Forward Output Current at T_A=75°C (Note 1)		I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	40			30				Amps
Maximum DC Forward Voltage Drop per Bridge Element at 1.0A DC		V_F	0.55		0.70	0.85		0.90		Volts
Maximum Reverse Current at rated DC Blocking Voltage per element	@T_A = 25°C	I_R	0.3			0.2		0.1		mAmps
	@T_A = 125°C		10							
Typical Junction Capacitance (Note 2)		C_J	110							pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	115							°C/W
Operating and Storage Temperature Range		$T_{J,TSTG}$	-50 to + 150							°C

NOTES: 1. Mounted on P.C. board with 4x(5x5mm^2) copper pad.
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient.

RATING AND CHARACTERISTIC CURVES (MBK12S THRU MBK120S)

FIG. 1
MAXIMUM NON-REPETITIVE SURGE CURRENT

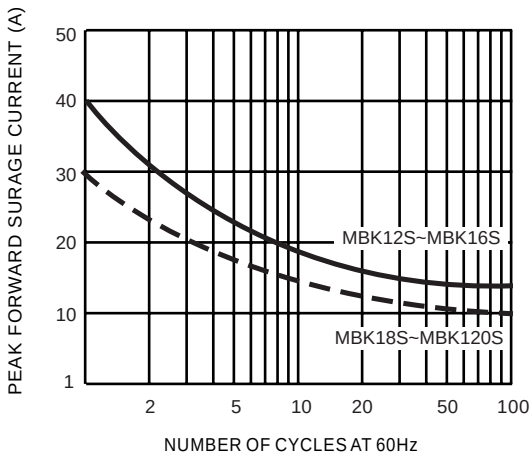


FIG. 2
DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

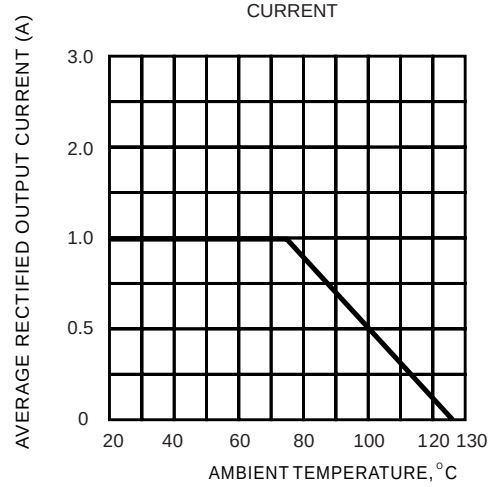


FIG.3
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

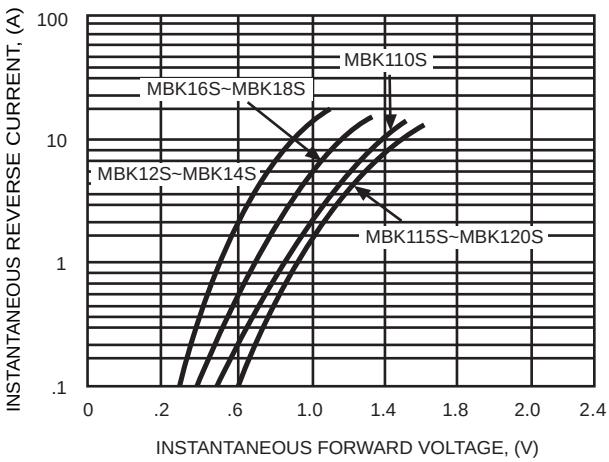


FIG.4
TYPICAL REVERSE CHARACTEISTICS