

VOLTAGE RANGE

20 to 200 Volts

CURRENT

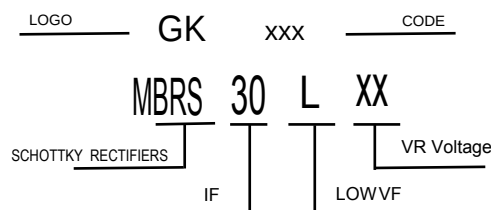
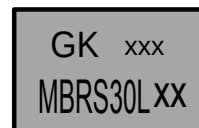
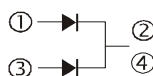
30.0 Amperes

FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Suitable for switching mode application

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: As Marked
- * Mounting position: Any
- * Weight: 2.24 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	MBRS30L20	MBRS30L40	MBRS30L60	MBRS30L80	MBR30L100	MBRS30L150	MBRS30L200	UNITS
Maximum Recurrent Peak Reverse Voltage	20	40	60	80	100	150	200	V
Maximum RMS Voltage	14	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	20	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current	30							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	400							A
Maximum Instantaneous Forward Voltage at 15A	0.58		0.72	0.85		0.88		V
Maximum DC Reverse Current Ta=25°C	0.1			0.02				mA
at Rated DC Blocking Voltage Ta=100°C	5			2				mA
Typical Junction Capacitance (Note1)	650							pF
Typical Thermal Resistance RθJC (Note 2)	1.4							°C/W
Operating Temperature Range Tj	-65 — +150							°C
Storage Temperature Range Tstg	-65 — +150							°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

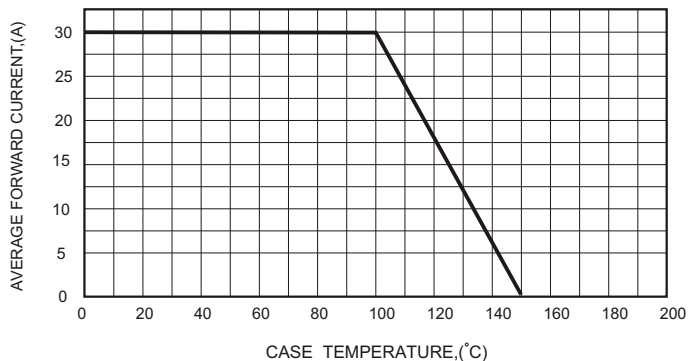


FIG.2-TYPICAL FORWARD CHARACTERISTICS

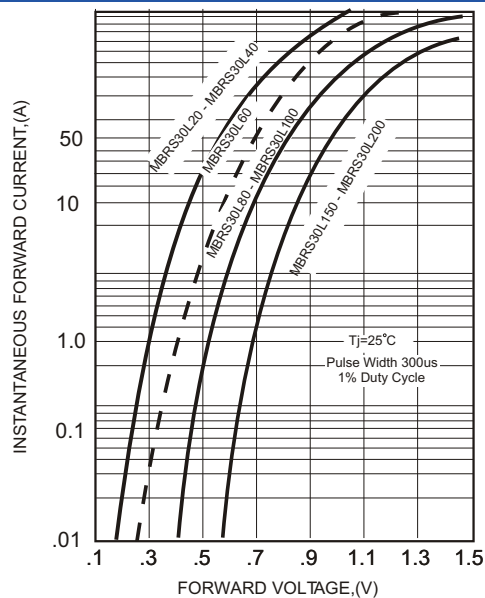


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

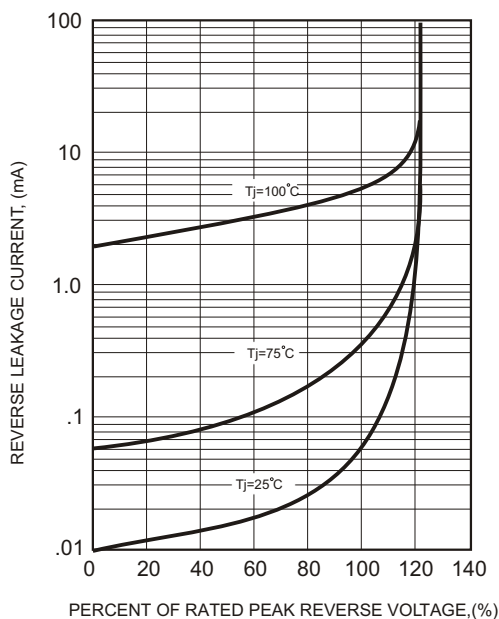


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

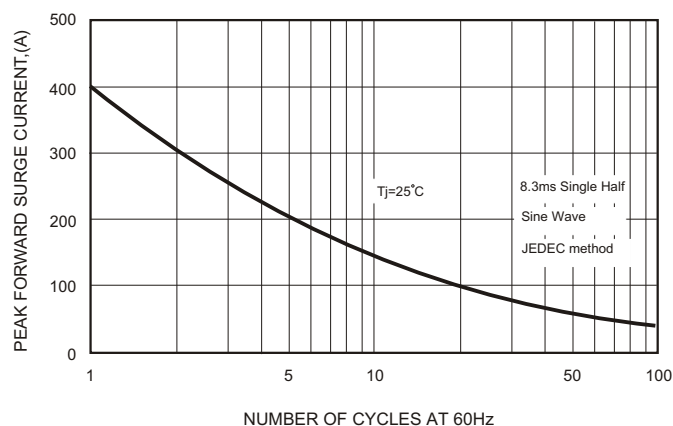
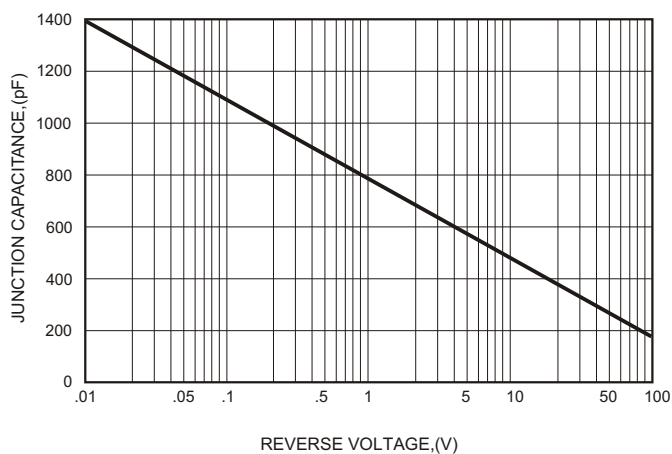
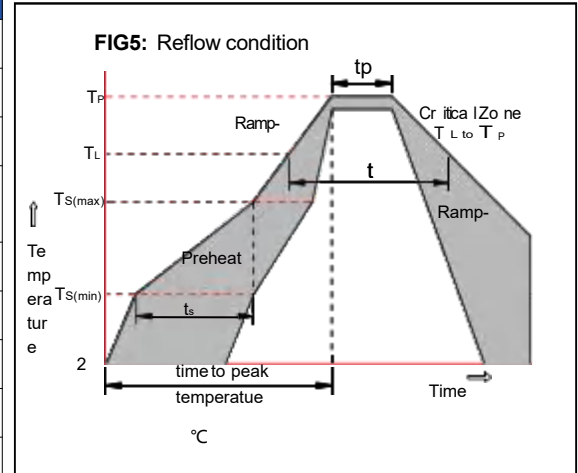


FIG.5-TYPICAL JUNCTION CAPACITANCE



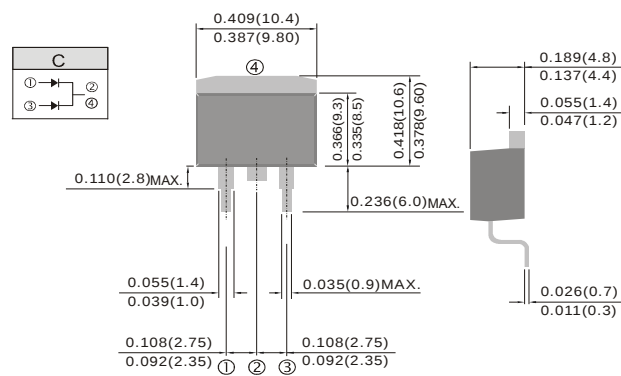
Soldering parameters

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



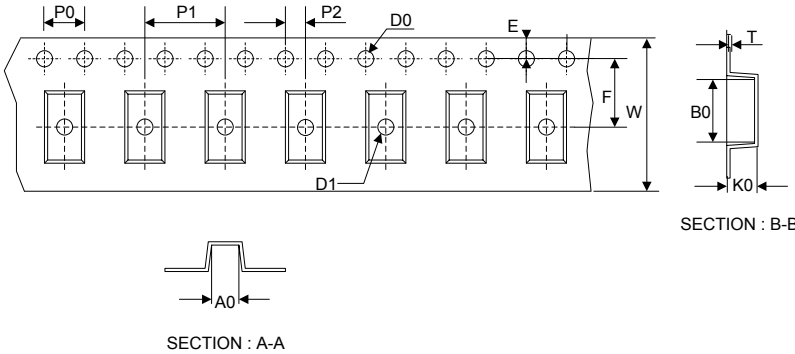
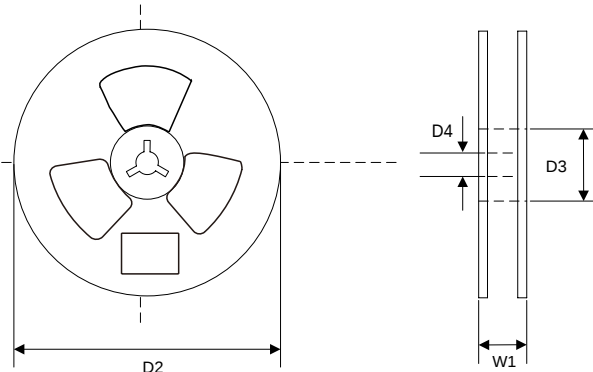
Package Dimensions & Suggested Pad Layout

TO-263 / D²PAK



Dimensions in inches and (millimeters)

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	16.00±0.20
		P2	2.00±0.20
		D0	1.50±0.20
		D1	1.50±0.20
		E	1.75±0.15
		F	11.50±0.20
		W	24.00±0.40
		A0	10.50±0.20
		B0	16.00±0.25
		K0	5.20±0.25
		T	0.35±0.10
		D2	330.0±5.0
		D3	73Min.
13" Reel		D4	14.0±2.5
		W1	28.00±2.0
		Quantity: 800PCS	