



MGBR30L120C

DIODE

DUAL MOS GATED BARRIER RECTIFIER

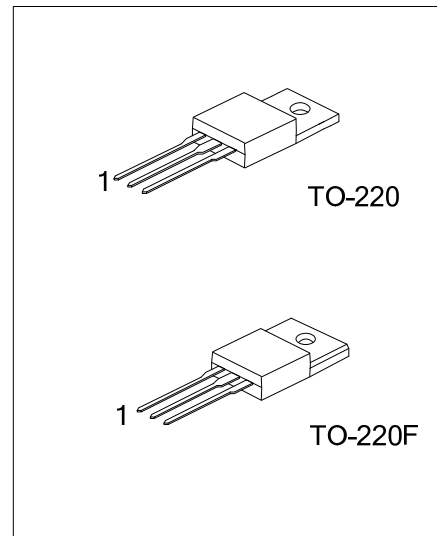
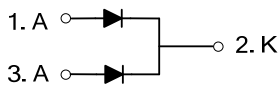
DESCRIPTION

The UTC **MGBR30L120C** is a dual mos gated barrier rectifiers, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

FEATURES

- * Low forward voltage drop
- * High switching speed

SYMBOL



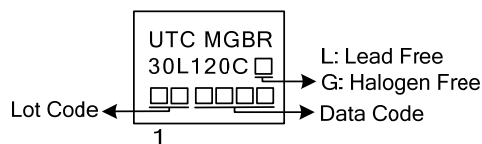
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|--------------------|--------------------|---------|----------------|---|---|---------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| MGBR30L120CL-TA3-T | MGBR30L120CG-TA3-T | TO-220 | A | K | A | Tube |
| MGBR30L120CL-TF3-T | MGBR30L120CG-TF3-T | TO-220F | A | K | A | Tube |

Note: Pin Assignment: A: Anode K: Cathode

| | | |
|--------------------|------------------|---|
| MGBR30L120CL-TA3-T | (1)Packing Type | (1) T: Tube |
| | (2)Package Type | (2) TA3: TO-220 |
| | (3)Green Package | (3) L: Lead Free, G: Halogen Free and Lead Free |

MARKING



■ ABSOLUTE MAXIMUM RATINGS (PER LEG) ($T_A=25^\circ\text{C}$ unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.

| PARAMETER | SYMBOL | RATINGS | UNIT |
|--|-----------|----------|------------------|
| DC Blocking Voltage | V_{RM} | 120 | V |
| Working Peak Reverse Voltage | V_{RWM} | 120 | V |
| Peak Repetitive Reverse Voltage | V_{RRM} | 120 | V |
| Average Rectified Output Current Per Device | Per Leg | 15 | A |
| | Total | 30 | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I_{FSM} | 150 | A |
| Operating Junction Temperature | T_J | -65~+150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -65~+150 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---------------------|---------------|---------|--------------------|
| Junction to Ambient | θ_{JA} | 62.5 | $^\circ\text{C/W}$ |
| Junction to Case | θ_{JC} | 3.31 | $^\circ\text{C/W}$ |

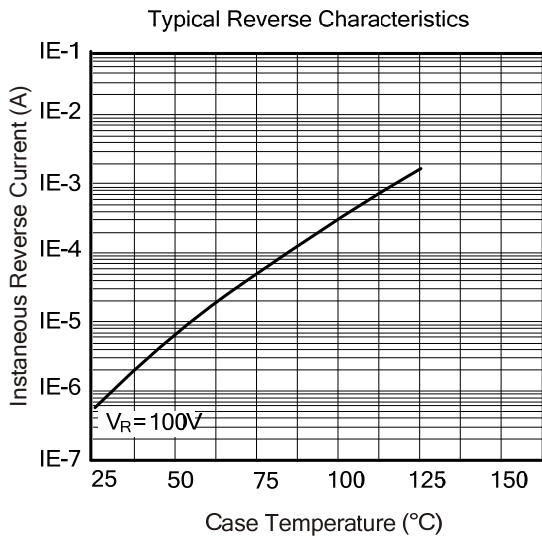
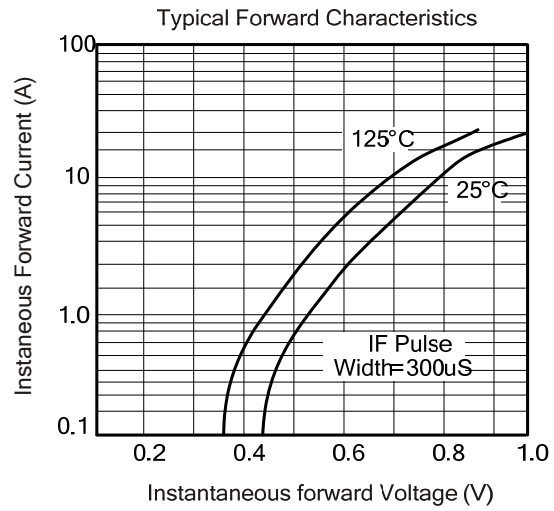
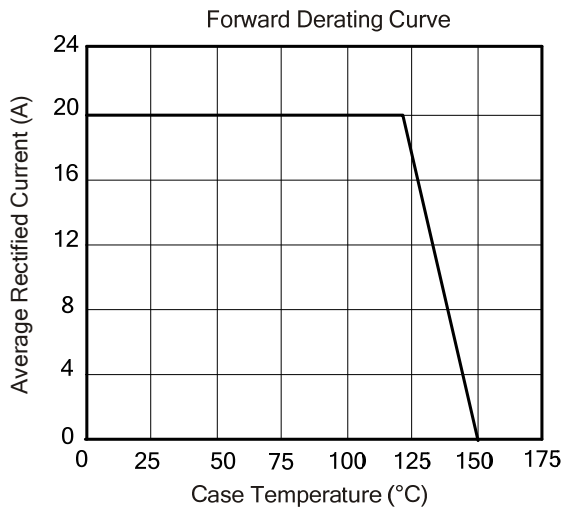
■ ELECTRICAL CHARACTERISTICS (PER LEG) ($T_A=25^\circ\text{C}$ unless otherwise specified.)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|------------------------------------|-------------|--|-----|-----|------|---------------|
| Reverse Breakdown Voltage (Note 1) | $V_{(BR)R}$ | $I_R=0.50\text{mA}$ | 120 | | | V |
| Forward Voltage Drop | V_{FM} | $I_F=15\text{A}, T_J=25^\circ\text{C}$ | | | 0.83 | V |
| | | $I_F=15\text{A}, T_J=125^\circ\text{C}$ | | | 0.68 | V |
| Leakage Current (Note 1) | I_{RM} | $V_R=120\text{V}, T_J=25^\circ\text{C}$ | | | 100 | μA |
| | | $V_R=120\text{V}, T_J=125^\circ\text{C}$ | | | 20 | mA |

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

■ TYPICAL CHARACTERISTICS



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