



MGBR40L150C

Preliminary

DIODE

MOS GATED BARRIER RECTIFIER

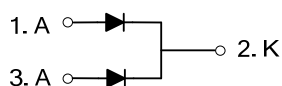
DESCRIPTION

The UTC **MGBR40L150C** is a surface mount mos gated barrier rectifier, 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



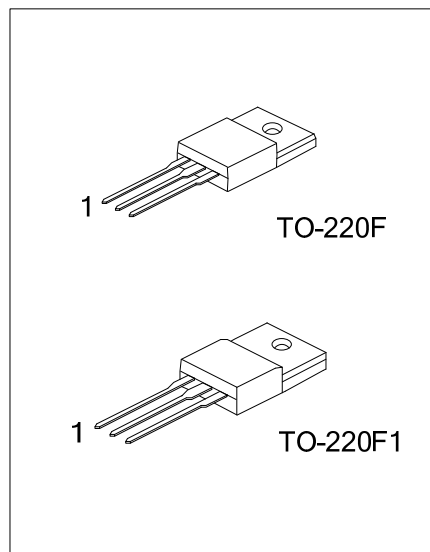
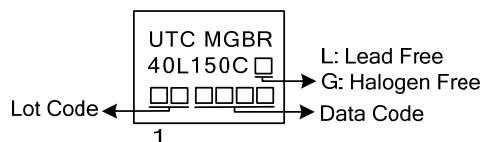
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR40L150CL-TF1-T	MGBR40L150CG-TF1-T	TO-220F1	A	K	A	Tube
MGBR40L150CL-TF3-T	MGBR40L150CG-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Common Cathode

MGBR40L150CG-TF1-T	(1) Packing Type	(1) T: Tube
	(2) Package Type	(2) TF1: TO-220F1, TF3: TO-220F
	(3) Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING



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

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

For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	150	V
Average Rectified Output Current Per Device	Per Leg	20	A
	Total	40	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	200	A
Operating Junction Temperature	T_J	$-65 \sim +150$	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-65 \sim +150$	$^{\circ}\text{C}$

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 CHARACTERISTICS (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ_{JC}	4	$^{\circ}\text{C}/\text{W}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=0.5\text{mA}$	150			V
Forward Voltage Drop	V_{FM}	$I_F=5\text{A}, T_J=25^{\circ}\text{C}$		0.70		V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$		0.58		V
		$I_F=10\text{A}, T_J=25^{\circ}\text{C}$		0.76		V
		$I_F=10\text{A}, T_J=125^{\circ}\text{C}$		0.64		V
		$I_F=20\text{A}, T_J=25^{\circ}\text{C}$		0.84	0.90	V
		$I_F=20\text{A}, T_J=125^{\circ}\text{C}$		0.74	0.82	V
Leakage Current	I_{RM}	$V_R=150\text{V}, T_J=25^{\circ}\text{C}$		0.50	100	μA
		$V_R=150\text{V}, T_J=125^{\circ}\text{C}$		0.05	15	mA

Note: Pulse Test: Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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