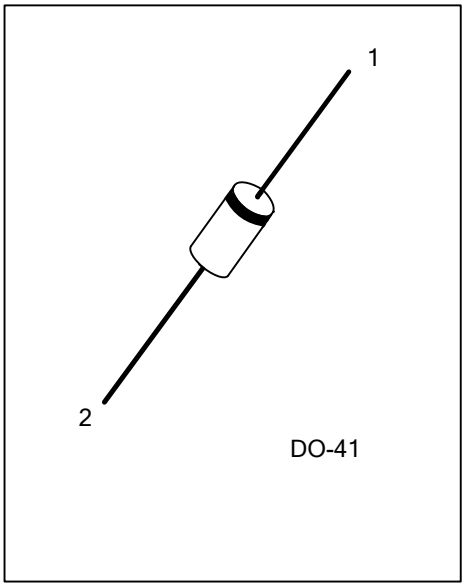
5.0A SCHOTTKY BARRIER RECTIFIER



■ DESCRIPTION

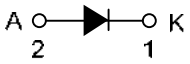
The UTC **MBR5100** is a 5.0A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR5100** is suitable for free wheeling and polarity protection, etc.

■ FEATURES

* Low forward voltage drop, High Current Capability
* Low power loss, High efficiency
* High Surge Capability
*For Use in Low Voltage,High Frequency Inverters and Polarity Protection Applications.

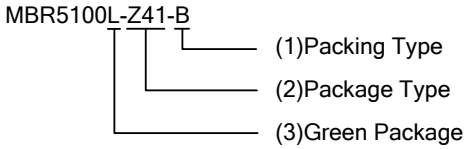
■ SYMBOL



■ ORDERING INFORMATION

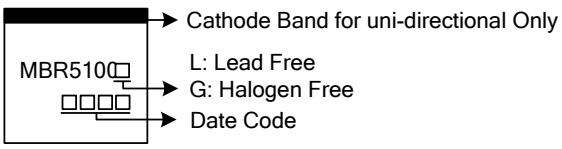
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR5100L-Z41-R	MBR5100G-Z41-R	DO-41	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



(1) B: Tape Box, R: Tape Reel
(2) Z41: DO-41
(3) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

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

PARAMETER	SYMBOL	RATINGS	UNIT
Working Peak Reverse Voltage	V_{RWM}	100	V
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Reverse Voltage	$V_{R(RMS)}$	70	V
DC Blocking Voltage	V_R	100	V
Average Rectified Output Current	I_O	5.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	150	A
Junction Temperature	T_J	-55 ~ +150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°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
Typical Thermal Resistance	θ_{JC}	25	°C/W

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.50mA	150			V
Instantaneous Forward Voltage Drop	V_{FM}	I_F=5A, T_C=25°C			0.80	V
		I_F=5A, T_C=125°C			0.75	V
Peak Reverse Current at Rated DC Blocking Voltage	I_{RM}	Rated DC Voltage, T_C=25°C			50	μA
		Rated DC Voltage, T_C=100°C			10	mA

Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.