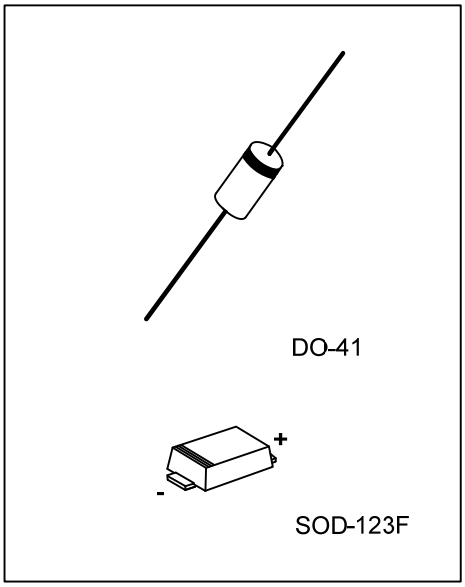
1.0A SCHOTTKY BARRIER RECTIFIER



■ DESCRIPTION

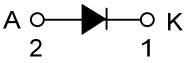
The UTC **MBR145** is a 1.0A schottky barrier rectifier, it uses UTC's advanced technology to provide the customers with high surge capability, high efficiency, high current capability, low power loss and low forward voltage drop, etc.

The UTC **MBR145** is suitable for free wheeling and polarity protection, etc.

■ FEATURES

* Low Reverse Current
* Low Stored Charge, Majority Carrier Conduction
* Low Power Loss/High Efficiency
* Highly Stable Oxide Passivated Junction

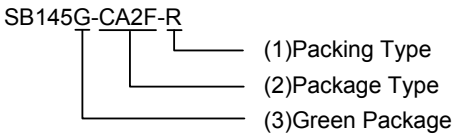
■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR145L-CA2F-R	MBR145G-CA2F-R	SOD-123F	K	A	Tape Reel
MBR145L-Z41-R	MBR145G-Z41-R	DO-41	K	A	Tape Reel
MBR145L-Z41-B	MBR145G-Z41-B	DO-41	K	A	Tape Box

Note: Pin Assignment: A: Anode K: Cathode

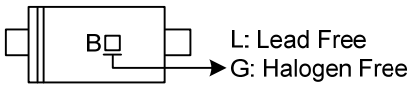
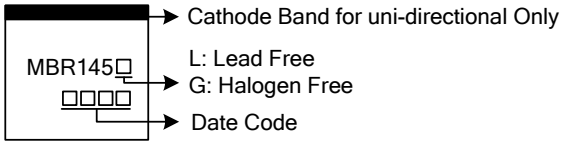


(1) R: Tape Reel, B: Tape Box

(2) CA2F: SOD-123, Z41: DO-41

(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOD-123F	DO-41
	

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

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
DC Blocking Voltage	V_R	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	31.5	V
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	I_O	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave	I_{FSM}	30	A
Typical Junction Capacitance	C_J	650	pF
Junction Temperature	T_J	-65 ~ +150	°C
Storage Temperature	T_{STG}	-65 ~ +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	SOD-123F	θ_{JL}	30 (Note)	°C/W
	DO-41	θ_{JC}	25	

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.50mA	45			V
Instantaneous Forward Voltage Drop	V_F	I_F=1.0A, T_C=25°C			0.70	V
		I_F=1.0A, T_C=125°C			0.65	
Instantaneous Reverse Current	I_R	Rated DC Voltage, T_C=25°C			500	μA
		Rated DC Voltage, T_C=125°C			10	mA

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