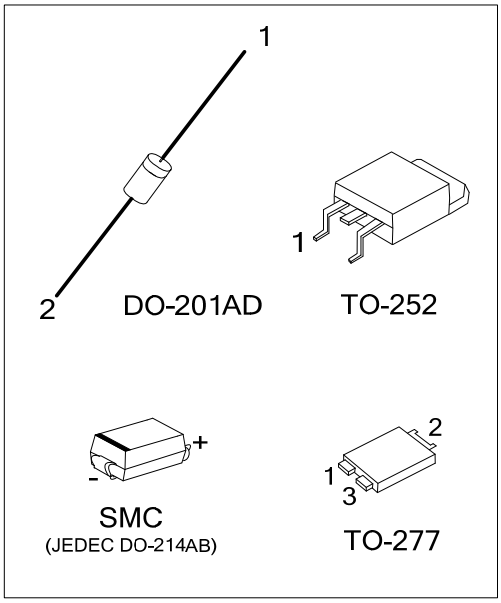
MOS GATED BARRIER RECTIFIER



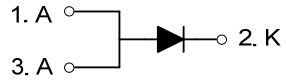
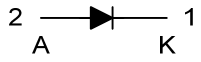
■ DESCRIPTION

The UTC **MGBR5S45** 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

* Super low forward voltage drop
* High switching speed

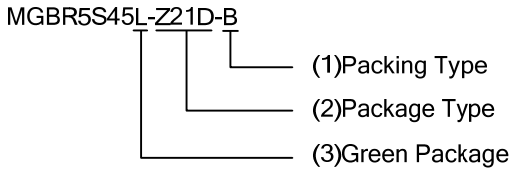
■ SYMBOL

TO-252 / TO-277	SMC
	

■ ORDERING INFORMATION

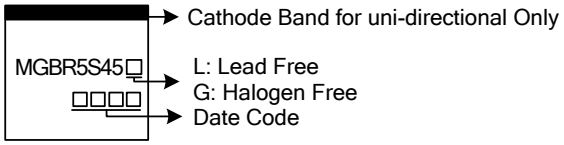
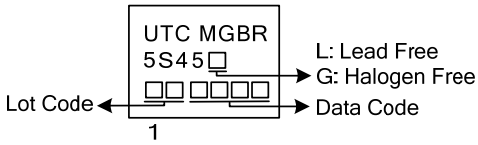
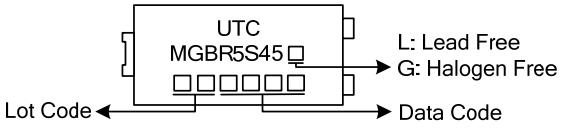
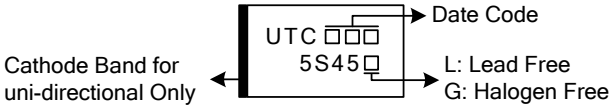
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR5S45L-Z21D-B	MGBR5S45G-Z21D-B	DO-201AD	K	A	-	Tape Box
MGBR5S45L-TN3-R	MGBR5S45G-TN3-R	TO-252	A	K	A	Tape Reel
MGBR5S45L-T27-R	MGBR5S45G-T27-R	TO-277	A	K	A	Tape Reel
MGBR5S45L-SMC-R	MGBR5S45G-SMC-R	SMC	K	A	-	Tape Reel

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



(1) B: Tape Box, R: Tape Reel
(2) Z21D: DO-201AD, T27: TO-227, TN3: TO-252
SMC: SMC
(3) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING

PACKAGE	MARKING
DO-201AD	
TO-252	
TO-277	
SMC	

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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}	45	V
Working Peak Reverse Voltage		V_{RWM}	45	V
Peak Repetitive Reverse Voltage		V_{RRM}	45	V
Average Rectified Output Current	T_C=140°C	I_O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	120	A
Operating 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 CHARACTERISTICS

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	DO-201AD/SMC	θ_{JA}	75	°C/W
	TO-252		110	
	TO-277		73	
Junction to Case	DO-201AD	θ_{JC}	15	°C/W
	TO-277		13	
	TO-252		2.5	
	SMC		35	

■ ELECTRICAL CHARACTERISTICS (T_A =25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.5mA	45			V
Instantaneous Forward Voltage	V_{FM}	I_F=5A, T_J=25°C			0.48	V
		I_F=5A, T_J=125°C			0.44	V
Leakage Current	I_{RM}	V_R=45V, T_J=25°C			500	μA
		V_R=45V, T_J=125°C			100	mA

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