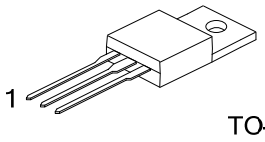
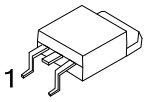
MGBR10S45C **Preliminary** ***DIODE***

DUAL MOS GATED BARRIER RECTIFIER



TO-220



TO-252

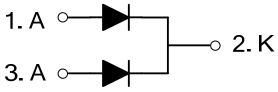
■ DESCRIPTION

The UTC **MGBR10S45C** 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

* Super low forward voltage drop
* High switching speed

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10S45CL-TA3-T	MGBR10S45CG-TA3-T	TO-220	A	K	A	Tube
MGBR10S45CL-TN3-R	MGBR10S45CG-TN3-R	TO-252	A	K	A	Tape Reel

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

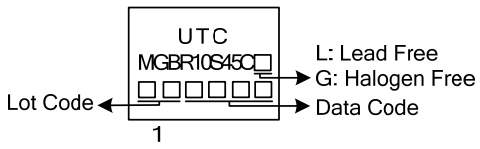
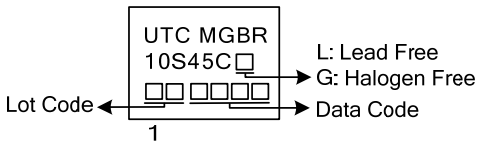
MGBR10S45CL-TA3-T

(1)Packing Type — (1) T: Tube, R: Tape Reel

(2)Package Type — (2) TA3: TO-220, TN3: TO-252

(3)Green Package — (3) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING

TO-220	TO-252
	

■ 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
RMS Reverse Voltage		$V_{R(RMS)}$	32	V
Average Rectified Output Current (T_C=140°C)	Per Leg	I_O	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	100	A
Repetitive Peak Avalanche Power (1μs, 25°C)		P_{ARM}	5000	W
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	TO-220	θ_{JA}	62.5	°C/W
	TO-252		110	
Junction to Case	TO-220	θ_{JC}	2	°C/W
	TO-252		2.5	

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	I_R=0.45mA	45			V
Forward Voltage Drop	V_{FM}	I_F=5A, T_J=25°C			0.45	V
		I_F=5A, T_J=125°C			0.40	V
Leakage Current (Note 1)	I_{RM}	V_R=45V, T_J=25°C		50	500	μA
		V_R=45V, T_J=125°C		12	40	mA

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. Thermal resistance junction to case mounted on heatsink.