



MGBR10S45C

Preliminary

DIODE

DUAL MOS GATED BARRIER RECTIFIER

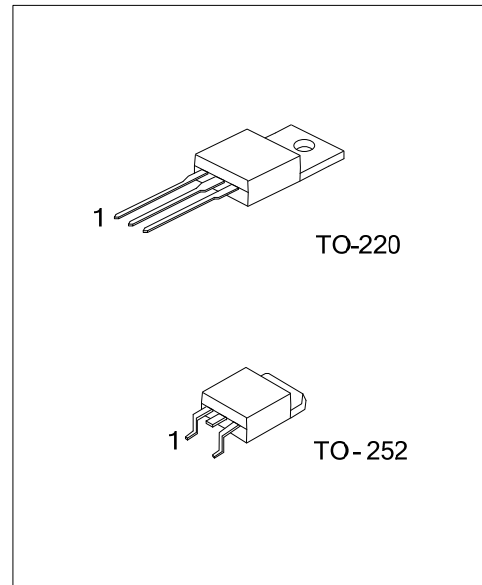
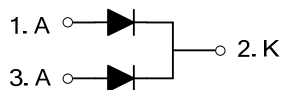
DESCRIPTION

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 (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel (2) TA3: TO-220, TN3: TO-252 (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING

TO-220	TO-252
UTC MGBR10S45C □□□□ Lot Code ← → L: Lead Free → G: Halogen Free → Data Code 1	UTC MGBR 10S45C □□□□ Lot Code ← → L: Lead Free → G: Halogen Free → Data Code 1

■ 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.

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