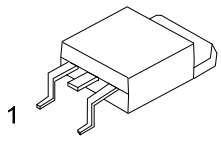
MGBR15V45

Preliminary ***DIODE***

MOS GATED BARRIER RECTIFIER



TO-252

■ DESCRIPTION

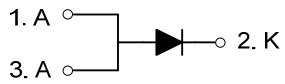
The UTC **MGBR15V45** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR15V45** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

* Very low forward voltage drop
* High current capability
* High surge capability
* High efficiency

■ SYMBOL



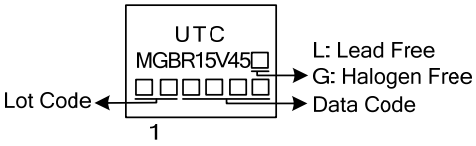
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR15V45L-TN3-R	MGBR15V45G-TN3-R	TO-252	A	K	A	Tape Reel

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

MGBR15V45L-TN3-R (1)Packing Type	(1) R: Tape Reel
(2)Package Type	(2) TN3: TO-252
(3)Lead Free	(3) L: Lead Free, G: Halogen Free

■ MARKING



■ 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 (Note 1)		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=125°C	I_O	15	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	180	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	θ_{JA}	110	°C/W
Junction to Case	θ_{JC}	2.5	°C/W

■ ELECTRICAL CHARACTERISTICS (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=0.50mA	45			V
Forward Voltage Drop	V_{FM}	I_F=15A, T_C=25°C			0.55	V
		I_F=15A, T_C=125°C			0.50	V
Peak Reverse Current at Rated DC Blocking Voltage (Note 1)	I_{RM}	V_R=45V, T_C=25°C			500	μA
		V_R=45V, T_C=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.
3. Mounted on an FR4 PCB, single-sided copper, with 100cm^2 copper pad area.