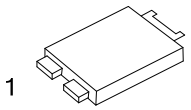
MGBR12L30

Preliminary ***DIODE***

MOS GATED BARRIER RECTIFIER



TO-277

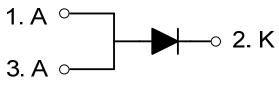
■ DESCRIPTION

The UTC **MGBR12L30** is a surface mount mos gatedbarrier rectifier,it uses UTC's advanced technology to provide customers withlow forward voltage drop and high switching speed, etc.

■ FEATURES

* Low forward voltage drop
* High switching speed

■ SYMBOL



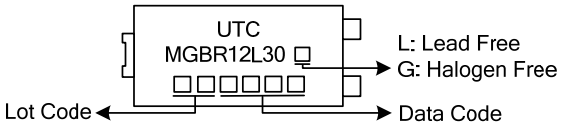
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR12L30L-T27-R	MGBR12L30G-T27-R	TO-277	A	K	A	Tape Reel

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

MGBR12L30L-T27-R (1)Packing Type (2)Package Type (3)Lead Free	(1) R: Tape Reel (2) T27: TO-227 (3) L: Lead Free, G: Halogen Free

■ MARKING INFORMATION

PACKAGE	MARKING
TO-277	

■ 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}	30	V
WorkingPeak Reverse Voltage		V_{RWM}	30	V
Peak Repetitive Reverse Voltage		V_{RRM}	30	V
RMS Reverse Voltage		$V_{R(RMS)}$	21	V
Average Rectified Output Current	T_C=140°C	I_O	12	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	200	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 (Note 3)

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	73	°C/W
Junction to Case	θ_{JC}	13	°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=1mA	30			V
Forward Voltage Drop	V_{FM}	I_F=12A, T_J=25°C			0.54	V
		I_F=12A, T_J=125°C			0.49	V
Leakage Current (Note 1)	I_{RM}	V_R=30V, T_J=25°C		100	500	μA
		V_R=30V, 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.
3. Mounted on an FR4 PCB, single-sided copper, with 100 cm^2 copper pad area.