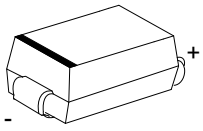
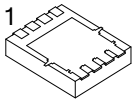
MOS GATED BARRIER RECTIFIER



SMB



DFN56060-8

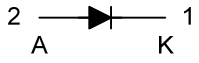
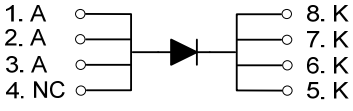
■ DESCRIPTION

The UTC **MGBR5U40** 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

* Ultra low forward voltage drop
* High switching speed

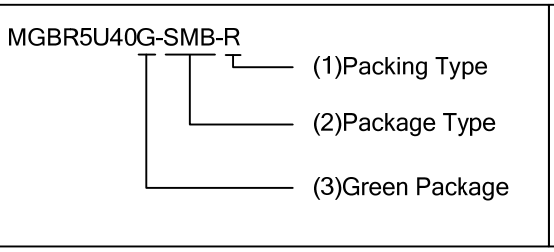
■ SYMBOL

SMB	DFN5060-8
	

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment								Packing
Lead Free	Halogen Free		1	2	3	4	5	6	7	8	
MGBR5U40L-SMB-R	MGBR5U40G-SMB-R	SMB	K	A	-	-	-	-	-	-	Tape Reel
MGBR5U40L-K08-5060-R	MGBR5U40G-K08-5060-R	DFN5060-8	A	A	A	NC	K	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Common Cathode NC: No C

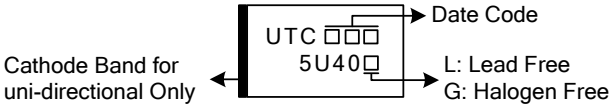
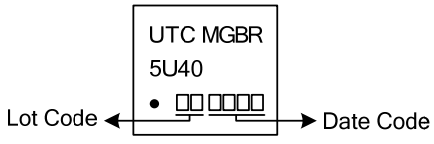


(1) R: Tape Reel

(2) SMB: SMB, K08-5060: DFN5060-8

(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SMB	DFN5060-8
	

■ 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}	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Average Rectified Output Current	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 (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	SMB	θ_{JL}	20	°C/W
	DFN5060-8		72 (Note)	°C/W

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

■ ELECTRICAL CHARACTERISTICS (PER LEG) (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	40			V
Instantaneous Forward Voltage	V_{FM}	I_F=5A, T_J=25°C			0.43	V
		I_F=5A, T_J=125°C			0.39	V
Leakage Current	I_{RM}	V_R=40V, T_J=25°C			500	μA
		V_R=40V, T_J=125°C			100	mA

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