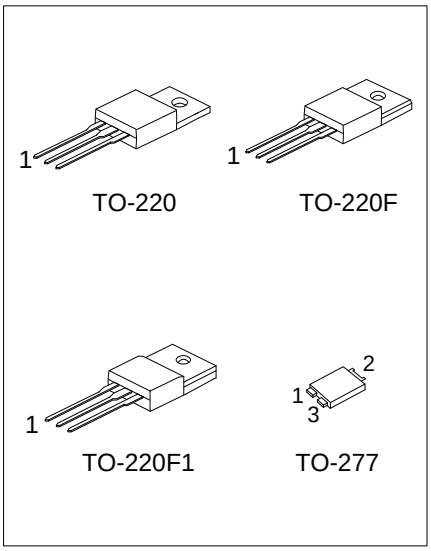
TGBR10V100

Preliminary ***DIODE***

TRENCH MOS SCHOTTKY BARRIER RECTIFIER



■ DESCRIPTION

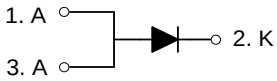
The UTC **TGBR10V100** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR10V100** 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

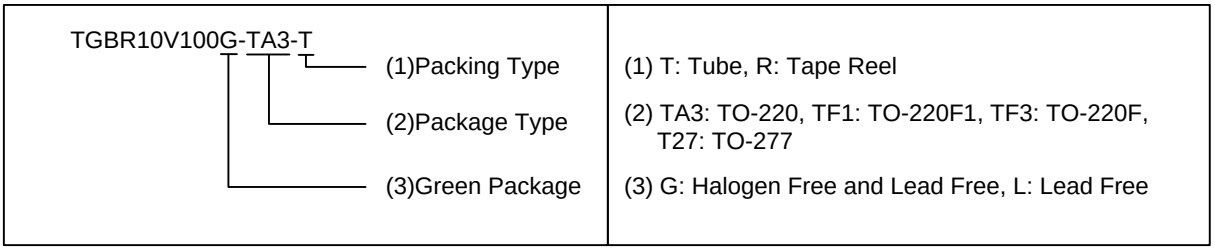
■ SYMBOL



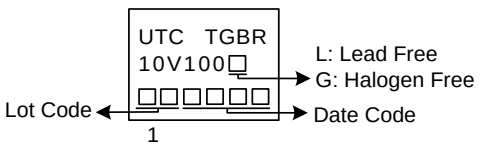
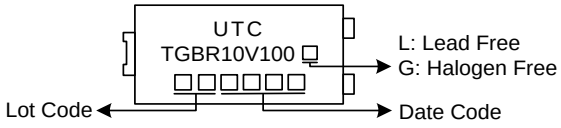
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR10V100L-TA3-T	TGBR10V100G-TA3-T	TO-220	A	K	A	Tube
TGBR10V100L-TF1-T	TGBR10V100G-TF1-T	TO-220F1	A	K	A	Tube
TGBR10V100L-TF3-T	TGBR10V100G-TF3-T	TO-220F	A	K	A	Tube
TGBR10V100L-T27-T	TGBR10V100G-T27-T	TO-277	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



■ MARKING

TO-220 / TO-220F / TO-220F1	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 (Note 1)		V_{RM}	100	V
Working Peak Reverse Voltage		V_{RWM}	100	V
Peak Repetitive Reverse Voltage		V_{RRM}	100	V
Average Rectified Output Current	T_C=125°C	I_O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	150	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
Junction to Ambient		θ_{JA}	62.5	°C/W
Junction to Case	TO-220	θ_{JC}	2	°C/W
	TO-220F TO-220F1		3.31	
	TO-277		4 (Note)	

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

■ 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	100			V
Forward Voltage Drop	V_{FM}	I_F=10A, T_C=25°C			0.75	V
		I_F=10A, T_C=125°C			0.60	V
Peak Reverse Current at Rated DC Blocking Voltage (Note 1)	I_{RM}	V_R=100V, T_C=25°C			100	μA
		V_R=100V, T_C=125°C			6	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.