



TGBR10U45

Preliminary

DIODE

TRENCH MOS SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

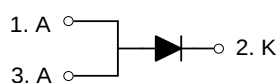
The UTC **TGBR10U45** is a trench mos schottky barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **TGBR10U45** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

FEATURES

- * Ultra low forward voltage drop
- * High current capability
- * High surge capability
- * High efficiency

SYMBOL



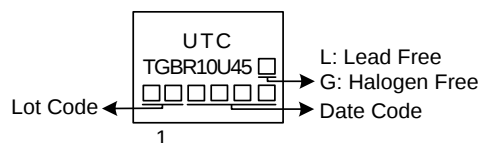
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TGBR10U45L-TN3-R	TGBR10U45G-TN3-R	TO-252	A	K	A	Tape Reel
TGBR10U45L-TQ2-T	TGBR10U45G-TQ2-T	TO-263	A	K	A	Tube
TGBR10U45L-TQ2-R	TGBR10U45G-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

TGBR10U45G-TN3-R (1) Packing Type (2) Package Type (3) Green Package		(1) R: Tape Reel, T: Tube (2) TN3: TO-252, TQ2: TO-263 (3) G: Halogen Free and Lead Free, L: Lead Free
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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	V _{RM}	45	V
Working Peak Reverse Voltage	V _{RWM}	45	V
Peak Repetitive Reverse Voltage	V _{RRM}	45	V
Average Rectified Output Current	I _O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	200	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 DATA (PER LEG)

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-252	6	°C/W
	TO-263	3	°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 =0.50mA	45			V
Forward Voltage Drop	V _{FM}	I _F =3A, T _C =25°C		0.39		V
		I _F =3A, T _C =125°C		0.28		V
		I _F =5A, T _C =25°C		0.41		V
		I _F =5A, T _C =125°C		0.31		V
		I _F =10A, T _C =25°C		0.45	0.47	V
		I _F =10A, T _C =125°C		0.38	0.42	V
Leakage Current	I _{RM}	V _R =45V, T _C =25°C		20	300	μA
		V _R =45V, T _C =125°C		10	75	mA

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

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