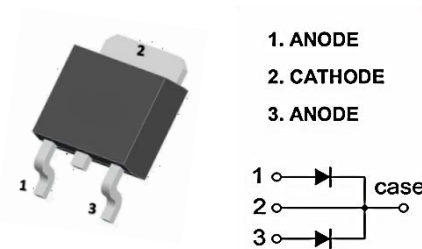


### DESCRIPTION

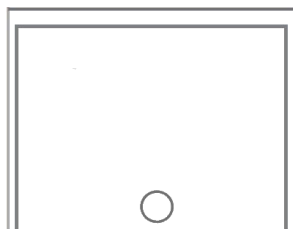
The MBT1040DT is a Schottky Barrier Rectifier with high efficiency, low power dissipation and high current capacity. It can be applied in high frequency, low voltage inverters, polarity protection and free wheeling applications.



### FEATURE

- \* High surge capability
- \* High efficiency, low power dissipation, high current capability, low forward voltage drop
- \* Guardring for overvoltage protection

### MARKING



### ABSOLUTE MAXIMUM RATINGS(TA=25°C, unless otherwise specified.)

PARAMETER		SYMBOL	RATINGS	UNIT
DC Blocking Voltage		VRM	40	V
Working Peak Reverse Voltage		VRWM	40	V
Peak Repetitive Reverse Voltage		VRRM	40	V
RMS Reverse Voltage		VR(RMS)	31.5	V
Average Rectified Output Current (TC=105°C)	Per Leg	IO	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		IFSM	100*2	A
Operating Junction Temperature		TJ	+150	°C
Storage Temperature		TSTG	-55 ~ +150	°C

Note: 1. Single phase, half wave, 60Hz, resistive or inductive load. For capacitance load, derate current by 20%.

2. 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.

3. Thermal resistance junction to case mounted on heatsink.

## ■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-252	$\theta_{JA}$	60	$^{\circ}\text{C/W}$
Junction to Case	TO-252	$\theta_{JC}$	4	$^{\circ}\text{C/W}$

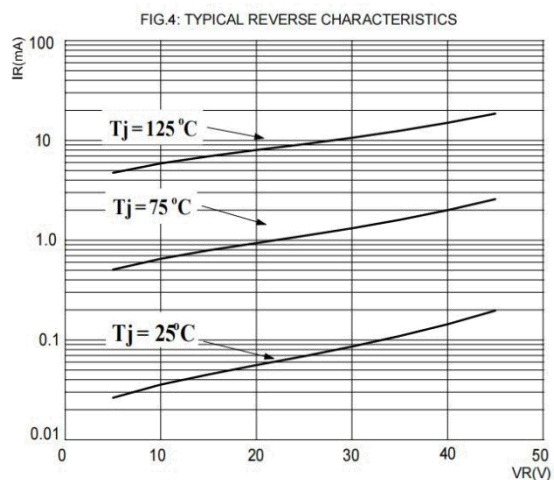
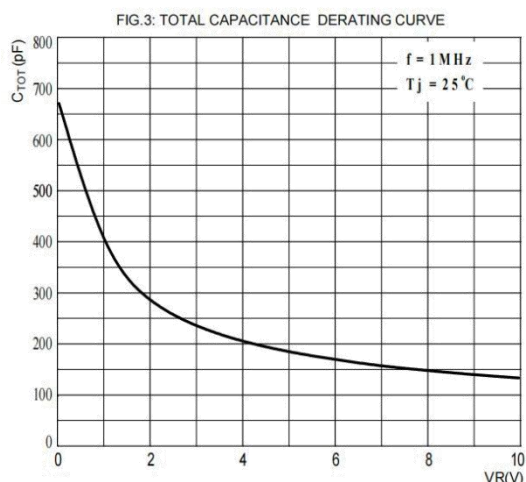
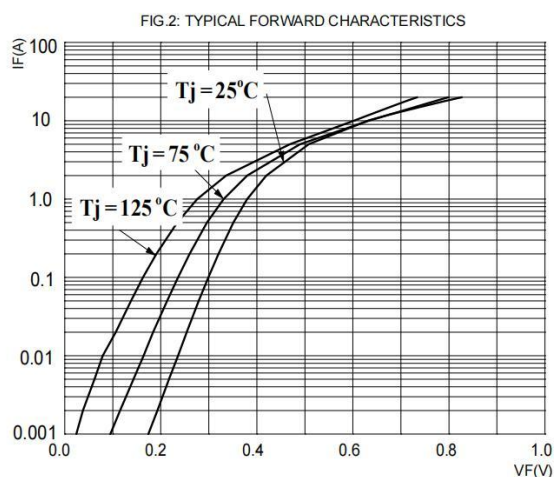
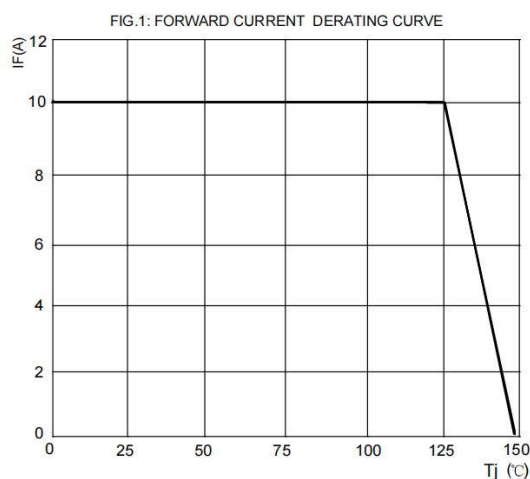
## ■ ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	V(BR)R	I R=0.45mA	40			V
Forward Voltage Drop	VFM	I F=5A			0.55	V
Leakage Current (Note 1)	IRM	VR=45V			200	$\mu\text{A}$

Notes: 1. Short duration pulse test used to minimize self-heating effect.

2. Thermal resistance junction to case mounted on heatsink.

## ■ TYPICAL CHARACTERISTICS



## ■ TO - 252 Package Outline Dimensions

