



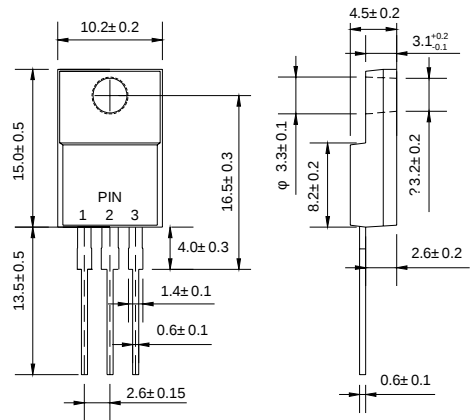
ITO - 220AB

Features

- ❖ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ❖ Metal silicon junction, majority carrier conduction
- ❖ Low power loss, high efficiency
- ❖ High current capability, low forward voltage drop
- ❖ High surge capability
- ❖ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ❖ Guardring for overvoltage protection
- ❖ High temperature soldering guaranteed:
260°C/10 seconds, 0.25" (6.35mm) from case

Mechanical Data

- ❖ Cases: ITO-220AB molded plastic
- ❖ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- ❖ Polarity: As marked
- ❖ Mounting position: Any
- ❖ Mounting torque: 5 in. - lbs. max
- ❖ Weight: 0.08 ounce, 2.24 grams



Dimensions in millimeters

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	MBRF 1035 CT	MBRF 1045 CT	MBRF 1050 CT	MBRF 1060 CT	MBRF 1090 CT	MBRF 10100 CT	MBRF 10150 CT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	150	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	105	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	150	V
Maximum Average Forward Rectified Current at T _C =133°C	I _(AV)	10							A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at T _C =133°C	I _{FRM}	10.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	120							A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	0.5							A
Maximum Instantaneous Forward Voltage at (Note 2) I _F = 5A, T _C =25°C I _F = 5A, T _C =125°C I _F =10A, T _C =25°C I _F =10A, T _C =125°C	V _F	0.70 0.57 0.80 0.67		0.80 0.65 0.90 0.75		0.85 0.75 0.95 0.85		0.88 0.78 0.98 0.88	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @T _C =25°C @ T _C =125°C	I _R	0.1 15				0.1 5.0			mA mA
Voltage Rate of Change, (Rated V _R)	dV/dt	10,000							V/μs
RMS Isolation Voltage (t=1.0 second, R.H. ≤ 30%, T _A =25°C) (Note 4) (Note 5) (Note 6)	V _{ISO}	4500 3500 1500							V
Typical Thermal Resistance Per Leg (Note3)	R _{θJC}	3.5							°C/W
Operating Junction Temperature Range	T _J	-65 to +150							°C
Storage Temperature Range	T _{STG}	-65 to +150							°C

- Notes:
- 2.0 μs Pulse Width, $f=1.0$ KHz
 - Pulse Test: 300 μs Pulse Width, 1% Duty Cycle
 - Thermal Resistance from Junction to Case Per Leg.
 - Clip Mounting (on case), where lead does not overlap heatsink with 0.110" offset.
 - Clip mounting (on case), where leads do overlap heatsink.
 - Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")

FIG.1- FORWARD CURRENT DERATING CURVE

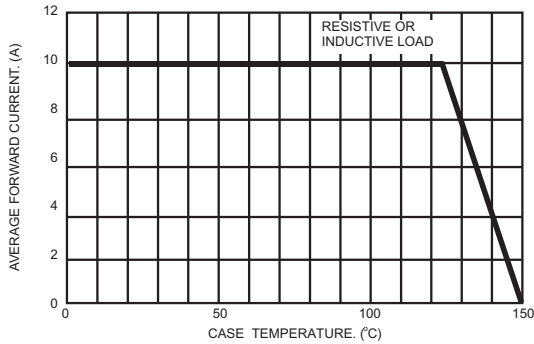


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

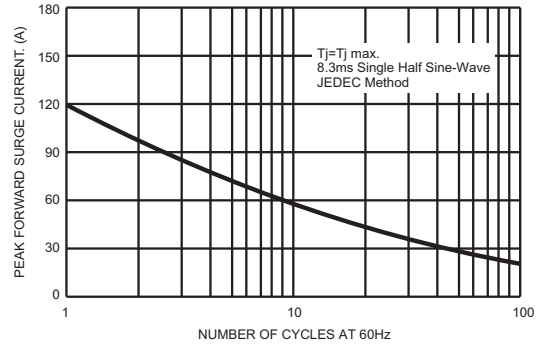


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

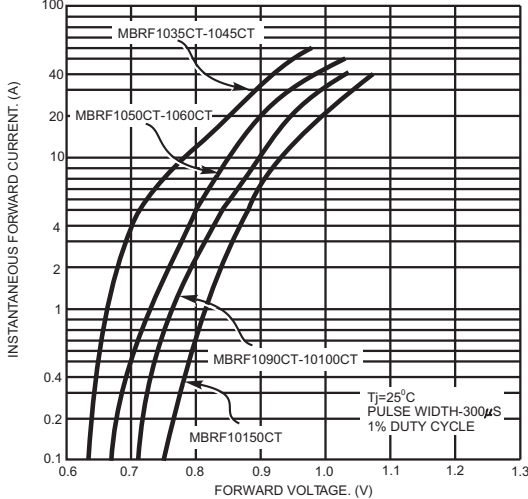


FIG.4- TYPICAL REVERSE CHARACTERISTICS

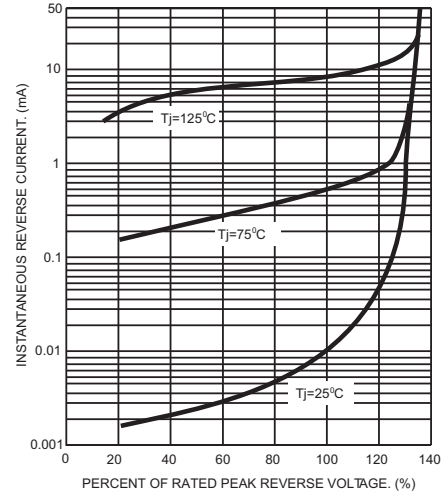


FIG.5- TYPICAL JUNCTION CAPACITANCE

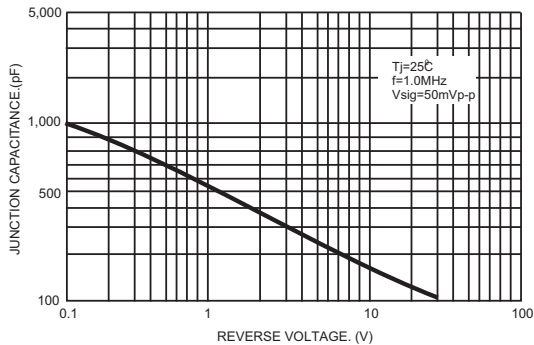


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

