

Pb Free Plating Product

MBRF2040CT thru MBRF20250CT



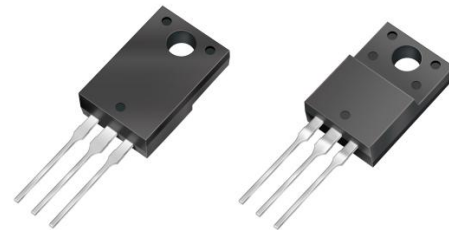
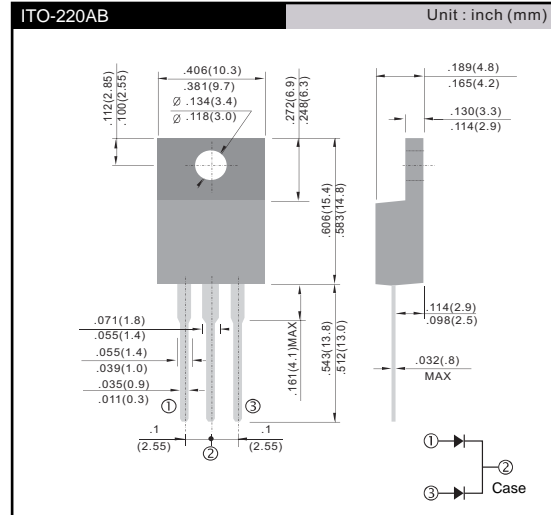
20.0 Ampere Insulated FullPak High Voltage Schottky Barrier Rectifiers

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: Section Copper Strip TO-220FP
- ◇ 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



Maximum Ratings And Electrical Characteristics

Section Copper Strip TO-220FP

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	MBRF2040CT	MBRF2060CT	MBRF20100CT	MBRF20150CT	MBRF20200CT	MBRF20250CT	Unit
Marking Code		MBRF2040CT	MBRF2060CT	MBRF20100CT	MBRF20150CT	MBRF20200CT	MBRF20250CT	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	60	100	150	200	250	V
Maximum RMS Voltage	V_{RMS}	28	42	70	105	140	175	V
Maximum DC Blocking Voltage	V_{DC}	40	60	100	150	200	250	V
Maximum Forward Voltage@10A, $T_A=25^\circ\text{C}$		0.70	0.79	0.81	0.87	0.90	0.95	V
	@10A, $T_A=125^\circ\text{C}$	0.57	0.70	0.71	0.77	0.80	0.85	
	@20A, $T_A=25^\circ\text{C}$	0.84	0.95	0.95	1.0	1.0	-	
Operating Temperature	T_J	-50 ~ +150						°C

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward Rectified Current	See Fig.1	I_O			20	A
Forward Surge Current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			150	A
Reverse Current	$V_R=V_{RRM}, T_A=25^\circ\text{C}$	I_R			0.1	mA
	$V_R=V_{RRM}, T_A=125^\circ\text{C}$				10	
Thermal Resistance	Junction to ambient	$R_{\theta JA}$		30		°C/W
Diode Junction Capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		150		pF
Storage Temperature		T_{STG}	-50		+150	°C

Rated and Characteristic Curve

