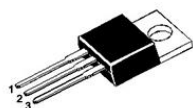


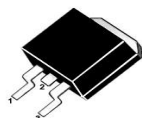
## SCHOTTKY BARRIER RECTIFIER



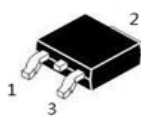
TO-220AB/MBR20100CT



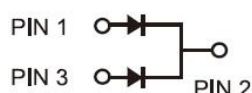
TO-220F/MBRF20100CT



TO-263/MBRB20100CT



TO-252/MBRD20100CT



### FEATURES

- Low forward voltage
- High current capability
- High forward surge capability
- Low power losses, High efficiency
- Guarding for over voltage protection

### APPLICATIONS

Low VF Schottky barrier rectifier are designed for high frequency, miniature switched mode power supplies such as adapters ,lighting and on-board DC/DC conerters

### Primary Characteristic

$I_O$	2*10A
$V_{RRM}$	100V
$I_{FSM}$	250A
$V_F$	0.68V
$T_{j,max}$	150°C
Assembly code	AL

### MECHANICAL DATA

- **Case:** Molded plastic
- **Polarity:** As marked
- **Mounting Position:** Any
- **Molded Plastic:** UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum, 10s per JESD 22-B106

### Maximum Ratings (Per Leg) at $T_a=25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
Maximum DC Blocking Voltage	$V_{DC}$	100	V
Maximum Average Forward Rectified Current	Per Leg	10	A
	Total	20	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	$I_{FSM}$	250	A
Operating Temperature Range	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-40 to +150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	2	°C/W
TO-220AB, TO-263, TO-252			
TO-220F		4	

Note1: Thermal resistance from Junction to case per leg mounted on heatsink.

### Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics	Symbol	Value		Unit		
Forward Voltage Drop(Note2)	$V_F$	Typ.	Max.	V		
		at $I_F=3A$	$T_A=25^\circ\text{C}$		0.69	-
			$T_A=125^\circ\text{C}$		0.60	-
		at $I_F=5A$	$T_A=25^\circ\text{C}$		0.74	-
			$T_A=125^\circ\text{C}$		0.61	-
		at $I_F=10A$	$T_A=25^\circ\text{C}$		0.82	0.85
			$T_A=125^\circ\text{C}$		0.68	-
		Maximum Reverse Current at $V_R=100V$	$I_R$		$T_A=25^\circ\text{C}$	1.5
$T_A=125^\circ\text{C}$	1			-		
				$\mu\text{A}$		
				mA		

Note2: Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

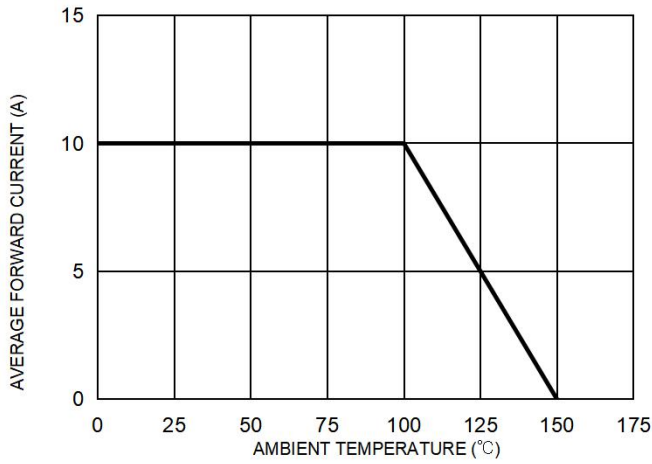


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

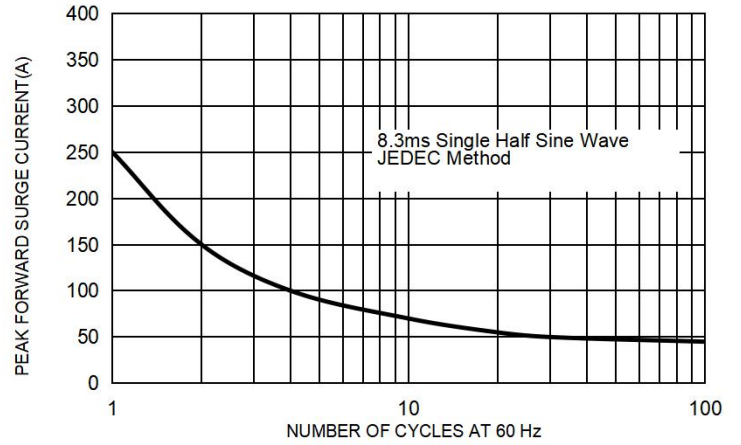


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

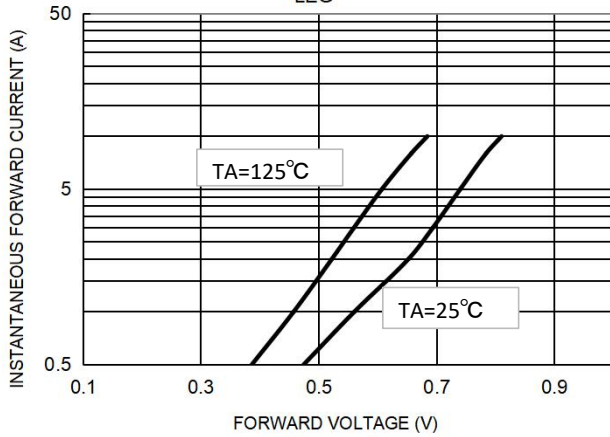
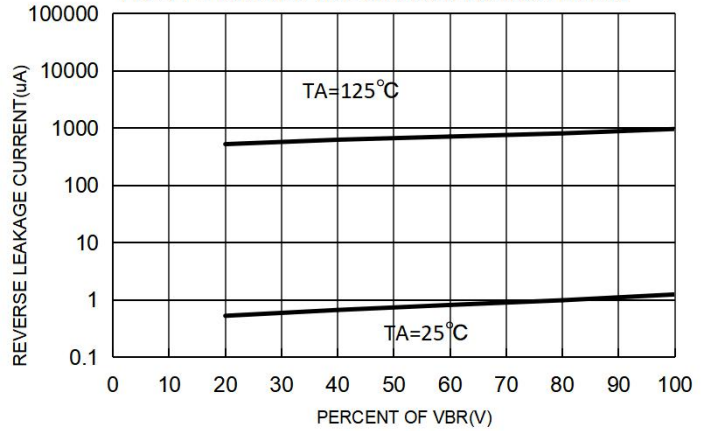
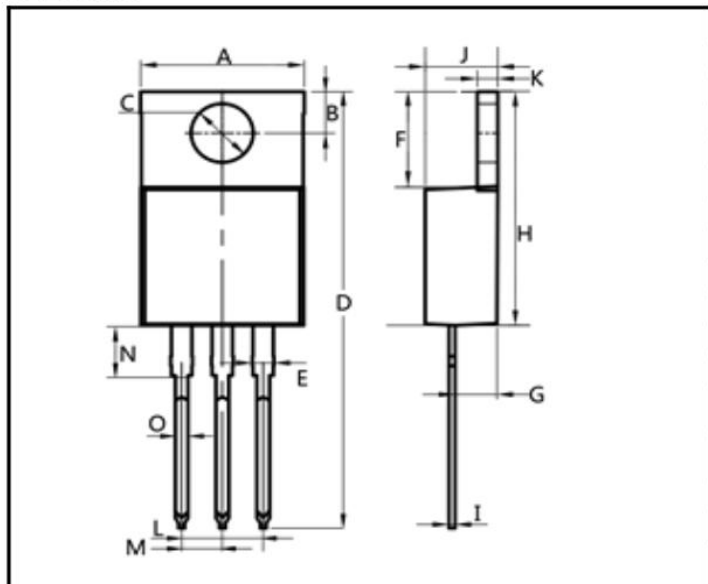


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

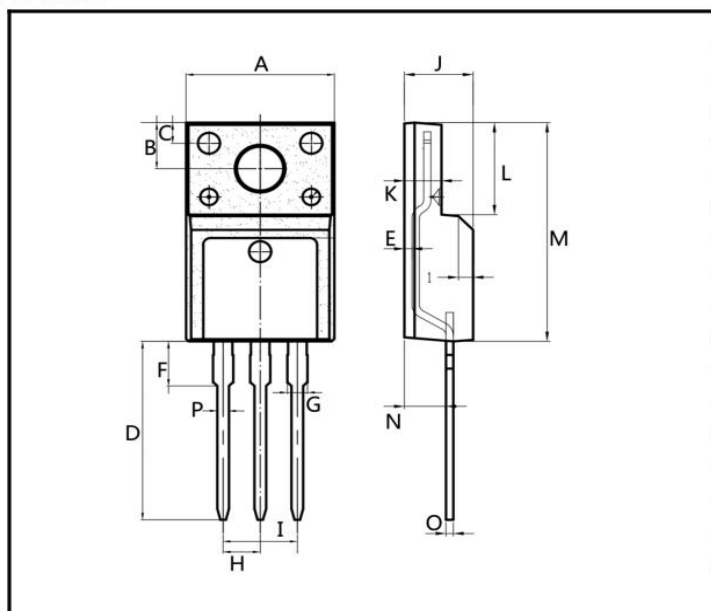


## Package Outline Dimensions millimeters

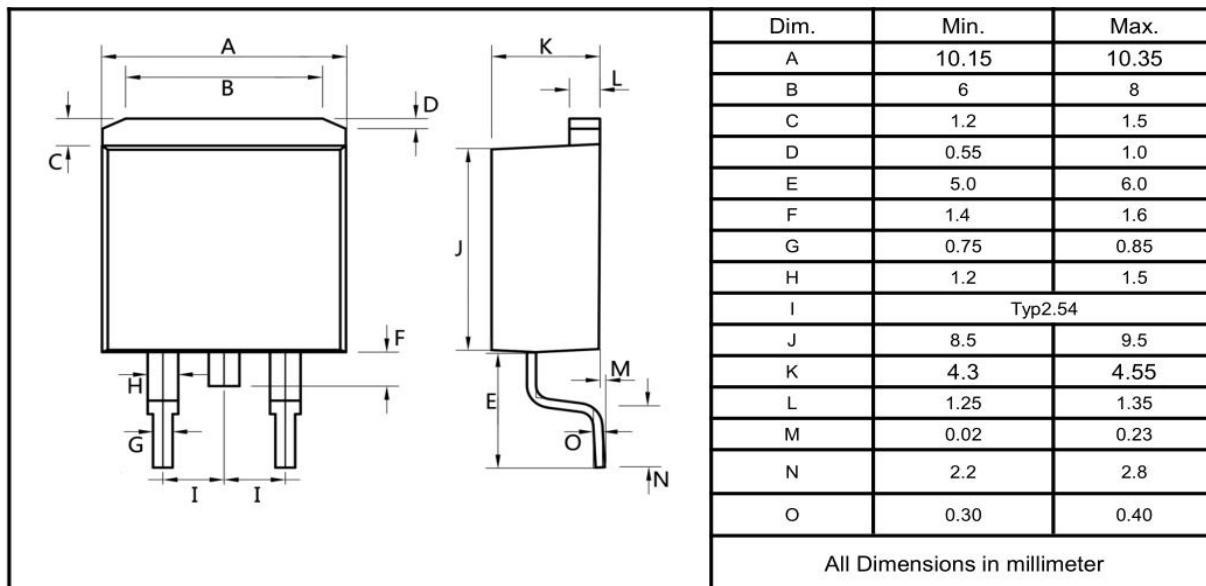
### TO-220AB

	Dim.	Min.	Max.
	A	10.15	10.35
	B	2.50	2.95
	C	3.70	3.90
	D	28.5	29.5
	E	1.20	1.40
	F	6.20	6.55
	G	2.4	2.6
	H	15.0	16.0
	I	0.35	0.42
	J	4.3	4.55
	K	1.25	1.35
	L	Typ5.08	
	M	Typ2.54	
	N	2.8	3.5
	O	0.70	0.90
All Dimensions in millimeter			

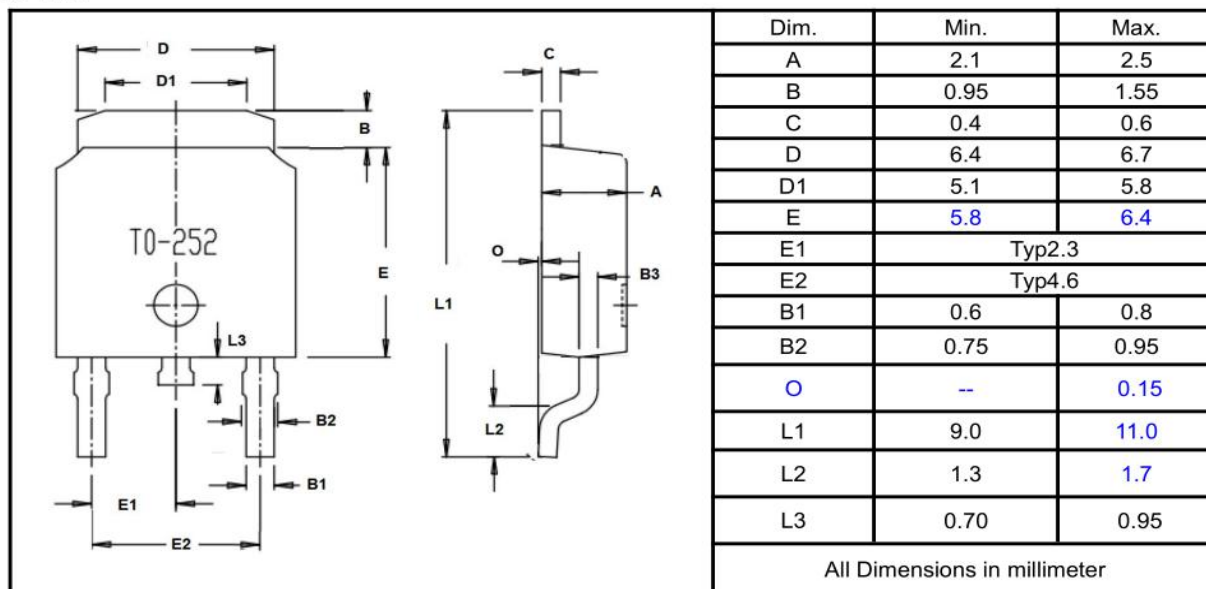
### TO-220F

	Dim.	Min.	Max.
	A	9.95	10.25
	B	2.95	3.25
	C	1.25	1.45
	D	12.80	13.20
	E	0.40	0.60
	F	2.8	3.5
	G	1.30	1.45
	H	Typ 2.54	
	I	Typ 5.08	
	J	4.60	4.75
	K	2.45	2.65
	L	6.5	6.8
	M	15.4	16.0
	N	2.75	3.05
	O	0.45	0.55
P	0.70	0.90	
All Dimensions in millimeter			

## TO-263



## TO-252



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