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SEMICONDUCTOR



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Product data sheet

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

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

Primary Characteristic	
I_o	2*10A
V_{RRM}	45V
I_{FSM}	260A
V_F	0.49V
T_{Jmax}	150°C
Assembly code	AA

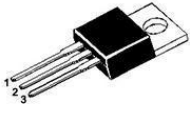
Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified			
Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum DC Blocking Voltage	V_{DC}	45	V
Maximum Average Forward Rectified Current	I_o	Per Leg	10
		Total	20
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave	I_{FSM}	260	A
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-40 to +150	°C
Typical Thermal Resistance (Note1) TO-220AB, TO-263, TO-252 TO-220F	$R_{\theta JC}$	2	°C/W
		4	

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

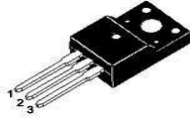
Electrical Characteristics (Per Leg) unless otherwise specified					
Characteristics		Symbol	Value		Unit
Forward Voltage Drop (Note2)	at $I_F=3A$	V_F	Typ.	Max.	V
			TA=25°C	0.42	
TA=125°C	0.34		-		
at $I_F=5A$	TA=25°C		0.46	-	
	TA=125°C		0.41	-	
at $I_F=10A$	TA=25°C		0.56	0.60	
	TA=125°C		0.49	-	
Maximum Reverse Current at $V_R=45V$	TA=25°C		I_R	40	
	TA=125°C	12		-	mA

Note2: Pulse test: 300 µs pulse width, 1 % duty cycle

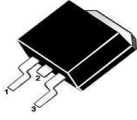
SCHOTTKY BARRIER RECTIFIER



TO-220AB/CT



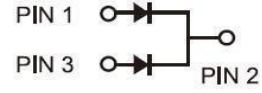
TO-220F/FCT



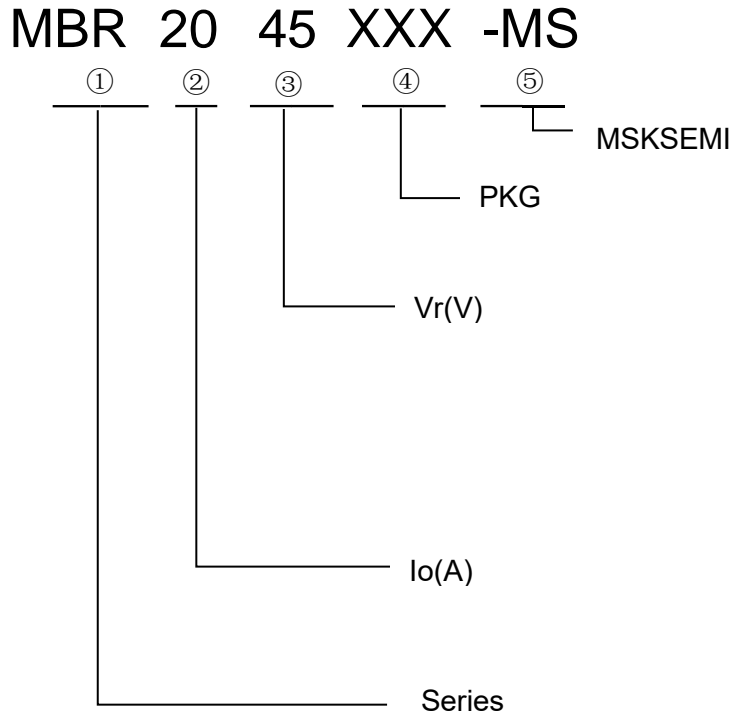
TO-263/DC



TO-252/CS



P/N Information



①	②	③	④	⑤
系列	平均整流电流	直流反向耐压	封装	MSKSEMI

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

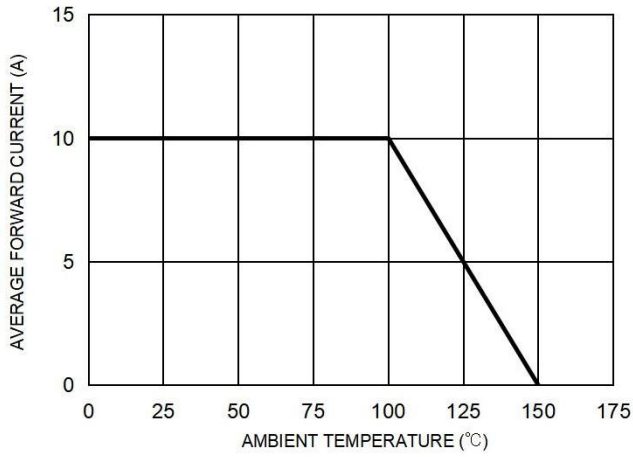


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

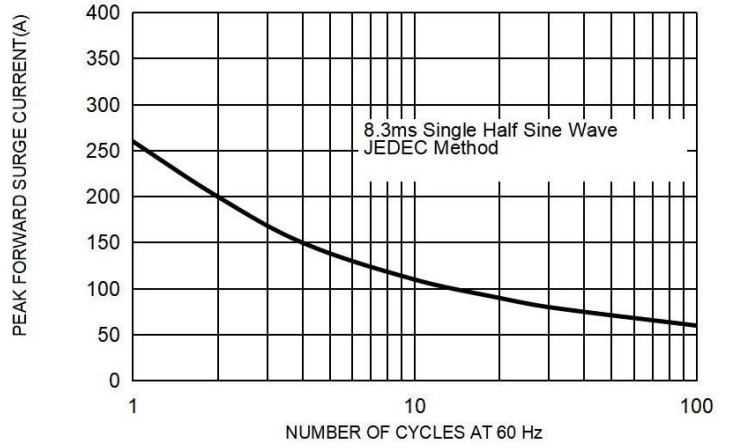


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

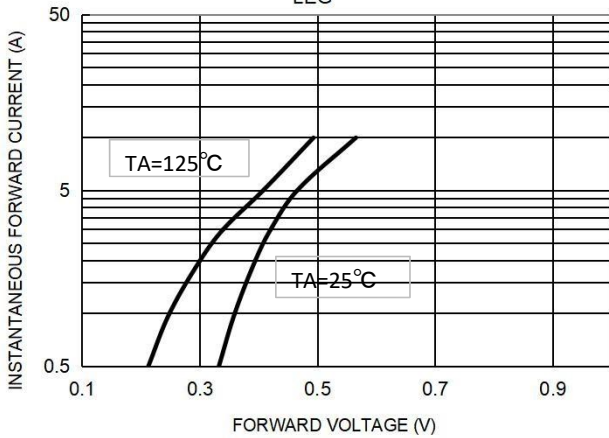
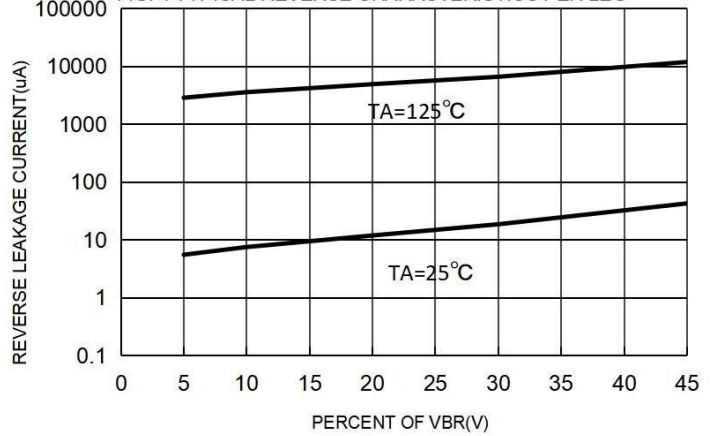
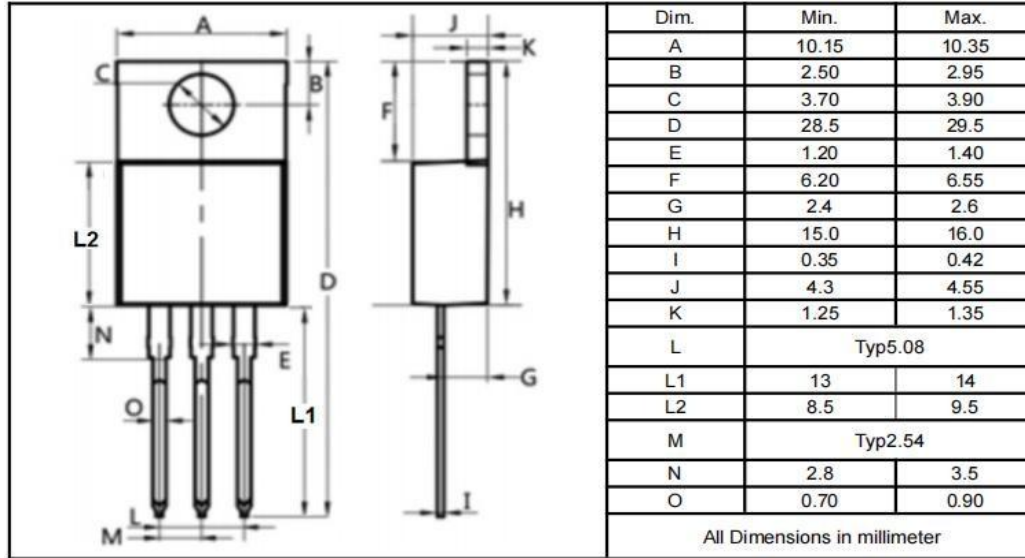


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Package Outline Dimensions millimeters

TO-220AB

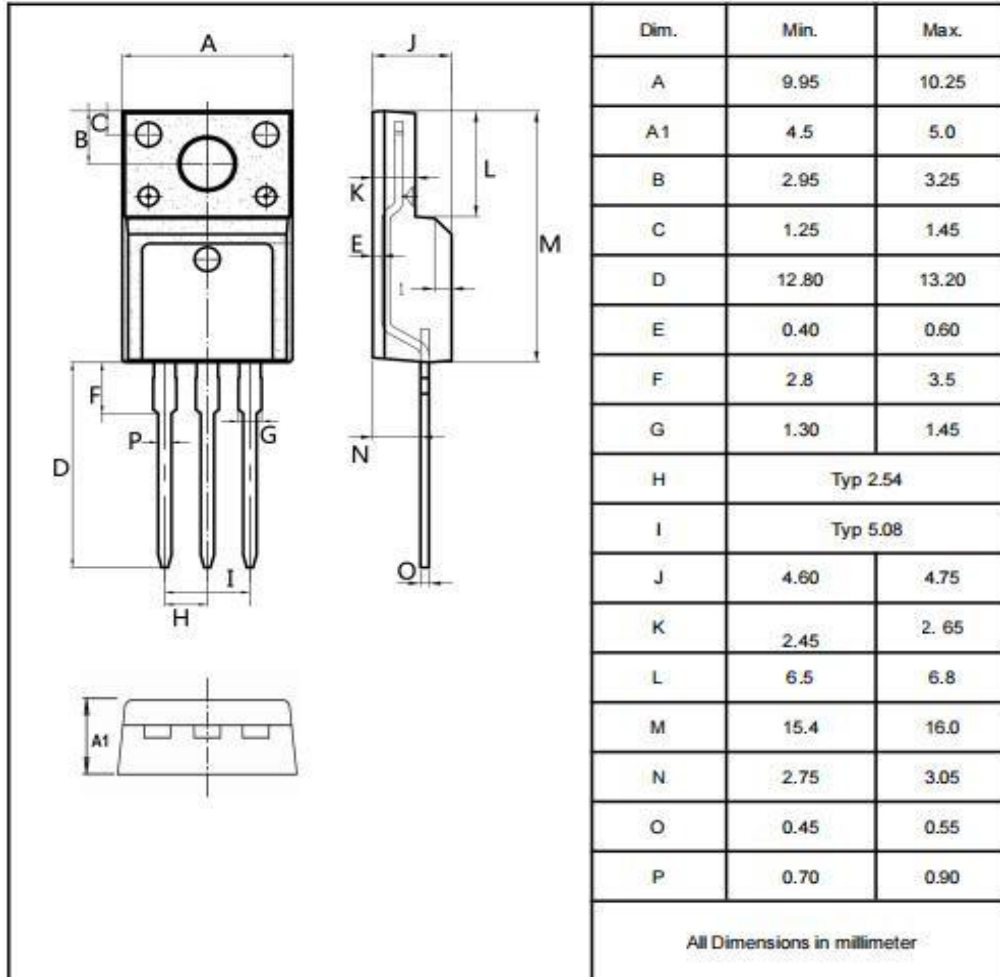


REEL SPECIFICATION

P/N	PKG	QTY
MBR2045CT-MS	TO-220AB	50pcs/tube 1000pcs/box

Package Outline Dimensions millimeters

TO-220F

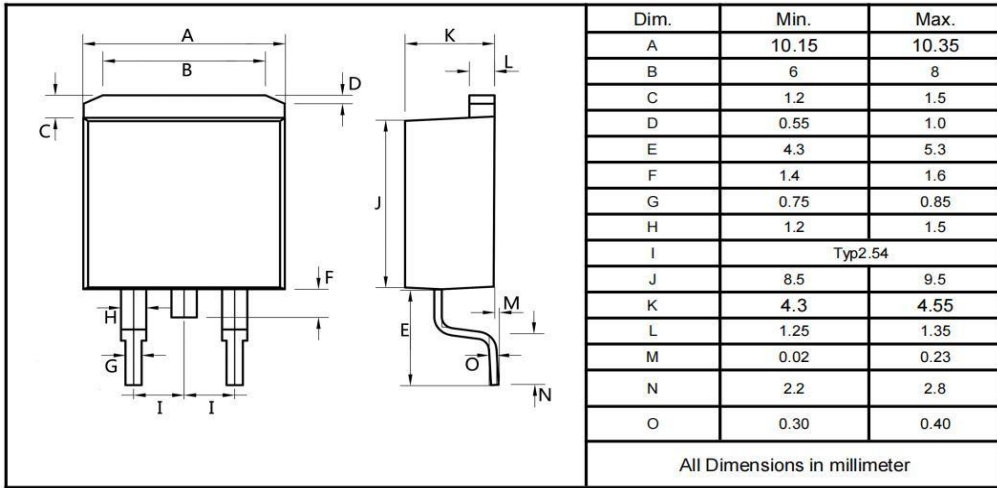


REEL SPECIFICATION

P/N	PKG	QTY
MBR2045FCT-MS	TO-220F	50pcs/tube 1000pcs/box

Package Outline Dimensions millimeters

TO-263



REEL SPECIFICATION

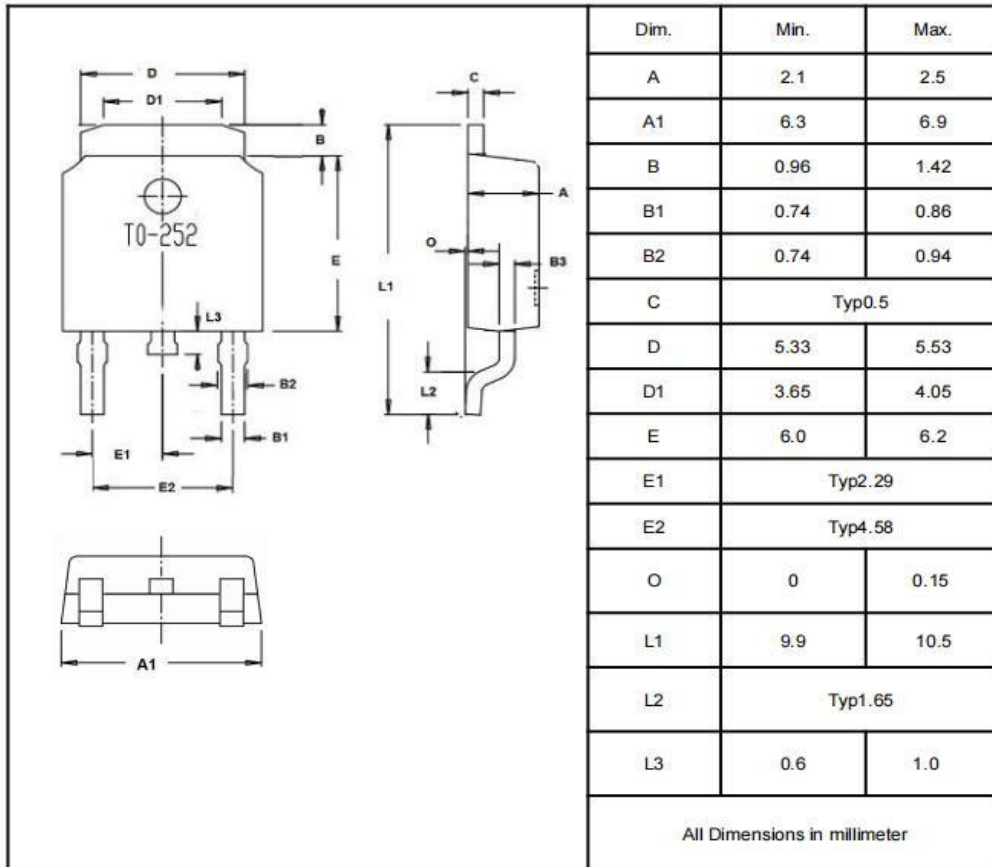
P/N	PKG	QTY
MBR2045DC-MS	TO-263	50pcs/tube 1000pcs/box

REEL SPECIFICATION

P/N	PKG	QTY
MBR2045DC-R-MS	TO-263	800pcs

Package Outline Dimensions millimeters

TO-252



REEL SPECIFICATION

P/N	PKG	QTY
MBR2045CS-MS	TO-252	2500

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