

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 100 V

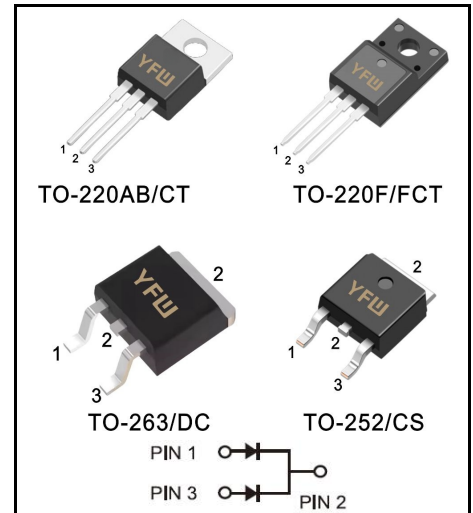
Forward Current - 20 A

FEATURES

- ◆Low forward voltage
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses, High efficiency
- ◆Guarding for over voltage protection
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: TO-220AB/CT TO-220F/FCT TO-263/DC TO-252/CS
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106



Primary Characteristic

I_o	2*10A
V_{RRM}	100V
I_{FSM}	250A
V_F	0.68V
T_J Max	150°C

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

Parameter		Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	100	V
Maximum RMS voltage		V _{RMS}	70	V
Maximum DC Blocking Voltage		V _{DC}	100	V
Maximum Average Forward Rectified Current	Per Leg	I _o	10	A
	Total		20	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave		I _{FSM}	250	A
Operating Temperature Range		T _J	-55 ~ +150	°C
Storage Temperature Range		T _{STG}	-55 ~ +150	°C
Typical Thermal Resistance ^(Note1) TO-220AB, TO-263 TO-220F TO252		R _{θJA} / R _{θJC}	2/4	°C/W

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

Electrical Characteristics (Per Leg) unless otherwise specified

Characteristics		Symbols	Value		Units
Forward Voltage Drop(Note2)		V _F	Typ	Max	V
at I _F =3A	TA=25°C		0.69	-	
	TA=125°C		0.60	-	
at I _F =5A	TA=25°C		0.74	-	
	TA=125°C		0.61	-	
at I _F =10A	TA=25°C		0.82	0.85	
	TA=125°C		0.68	-	
Maximum Reverse Current at V _R =100V	TA=25°C	I _R	1.5	10	uA
	TA=125°C		1	-	mA

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

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

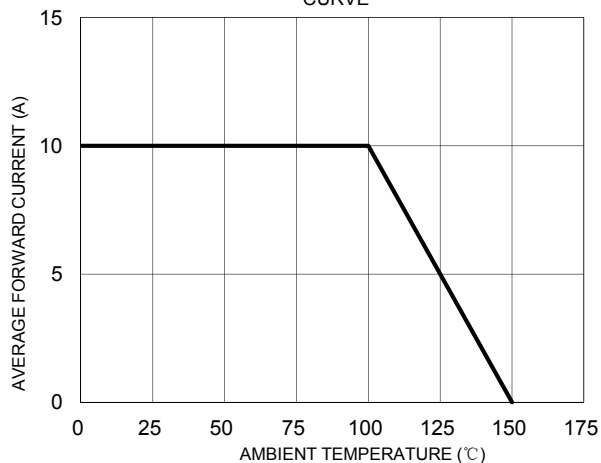


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

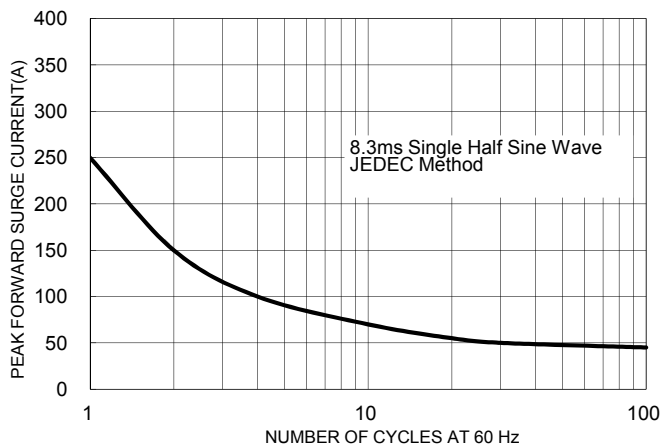


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

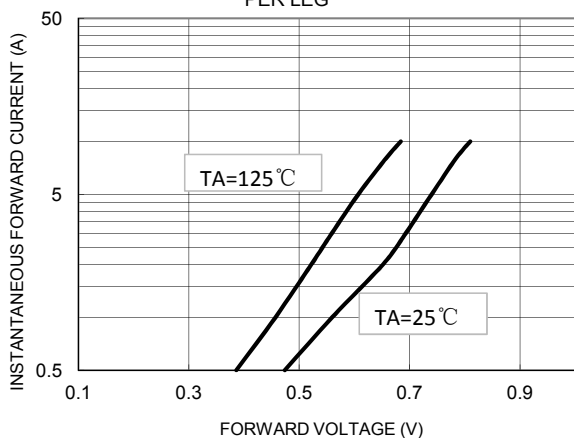
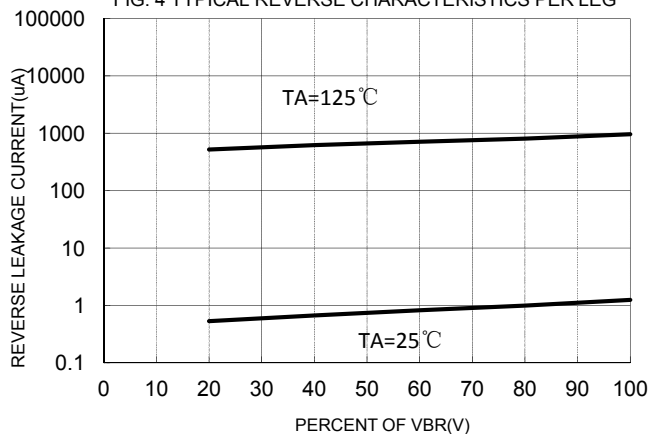
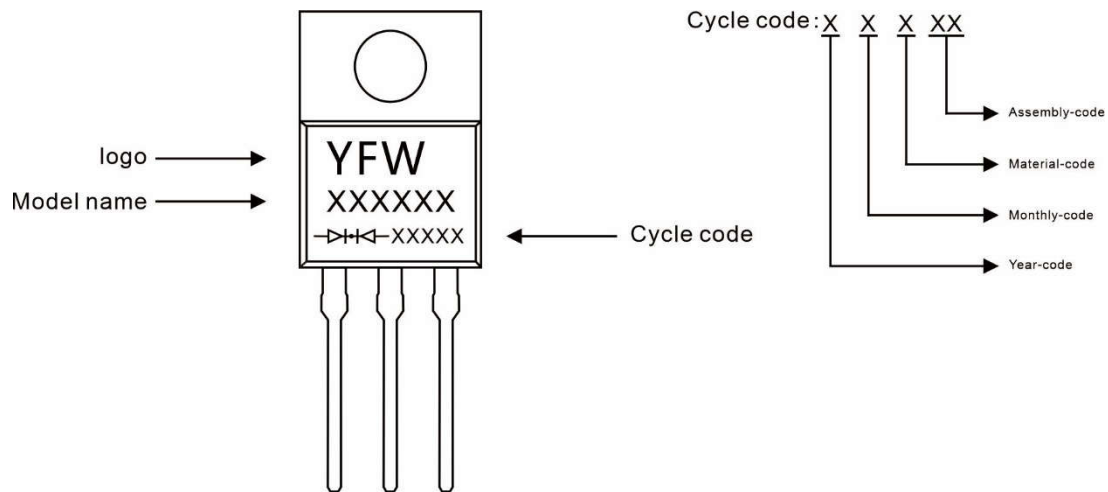


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking Diagram



Ordering information

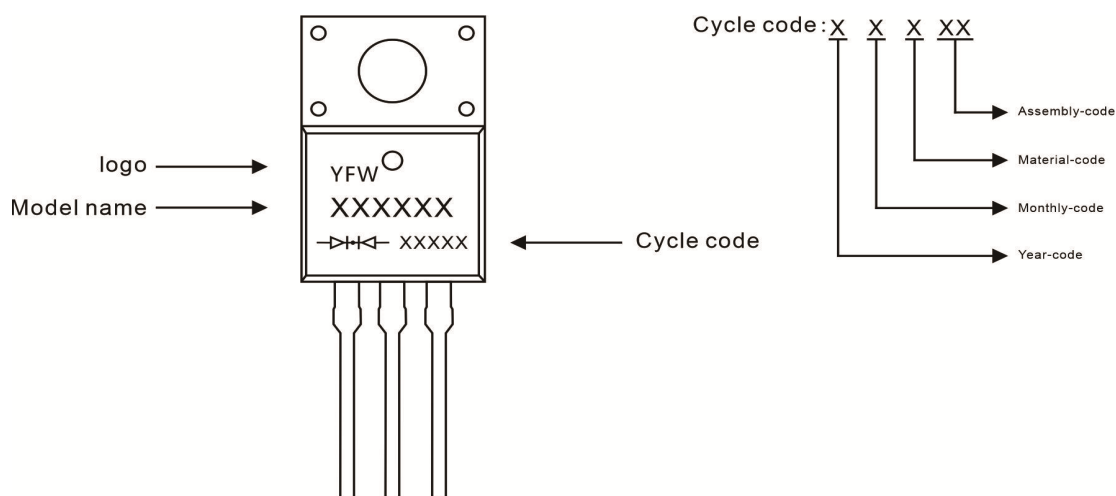
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MBR20100CT	TO-220AB	0.07oz(1.96g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220AB

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	0.00	0.15	0.000	0.006
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
E1	12.00	12.50	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	13.20	13.80	0.520	0.543
L1	3.80	4.20	0.150	0.165
Φ	3.60	3.96	0.142	0.156

Marking Diagram



Ordering information

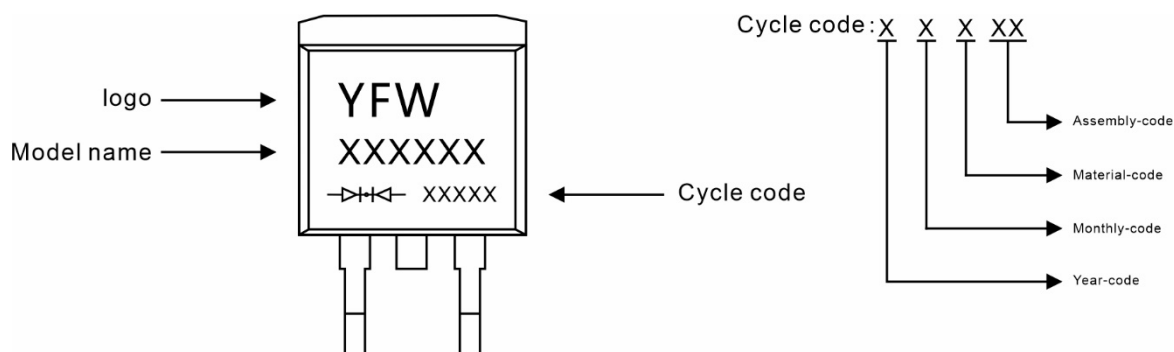
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MBR20100FCT	TO-220F	0.06oz(1.74g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220F

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.50	4.90	0.177	0.193
A1	2.34	2.74	0.092	0.108
A2	2.66	2.86	0.105	0.113
b	0.75	0.85	0.030	0.033
b1	1.24	1.44	0.049	0.057
c	0.40	0.60	0.016	0.024
D	10.00	10.32	0.394	0.406
E	15.75	16.05	0.620	0.632
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	3.10	3.5	0.122	0.138
L	13.50	13.90	0.531	0.547
L1	2.90	3.30	0.114	0.130
Φ	3.10	3.30	0.122	0.130

Marking Diagram



Ordering information

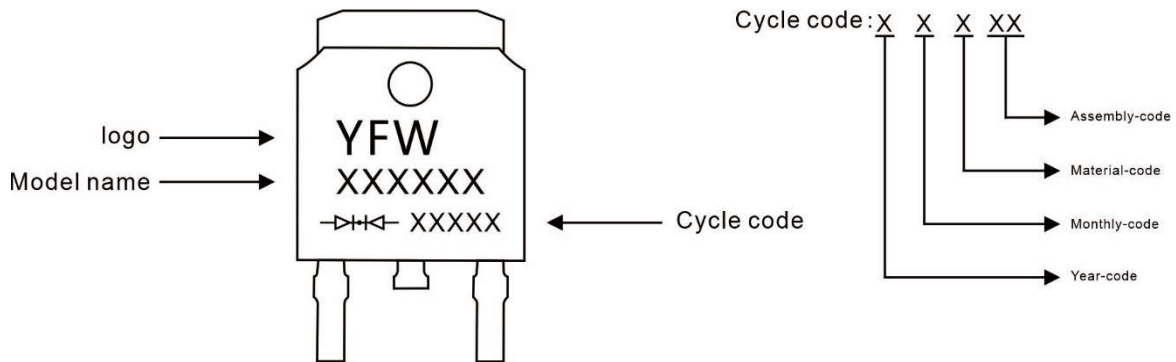
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MBR20100DC	TO-263	0.04oz(1.16g)	800pcs/reel	1600pcs/box 8000pcs/Cartron

Package Dimensions

TO-263

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	0.00	0.15	0.000	0.006
A2	4.30	4.55	0.169	0.179
B	1.10	1.50	0.043	0.059
b	0.70	0.90	0.028	0.035
b1	1.20	1.50	0.047	0.059
c	0.30	0.60	0.012	0.024
c1	1.17	1.37	0.046	0.054
D	9.90	10.35	0.390	0.407
E	8.50	9.5	0.335	0.374
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
L	15.00	15.55	0.591	0.612
L1	4.30	5.30	0.169	0.208
L2	2.40	2.60	0.094	0.102
L3	1.60	1.80	0.063	0.071

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MBR20100CS	TO-252	0.011oz(0.32g)	2500pcs/reel	5000pcs/box 25000pcs/Cartron

Package Dimensions

TO-252

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	10.00	11.00	0.393	0.433
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059

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