

ULTRAFST RECOVERY RECTIFIERS

Reverse Voltage - 400 V

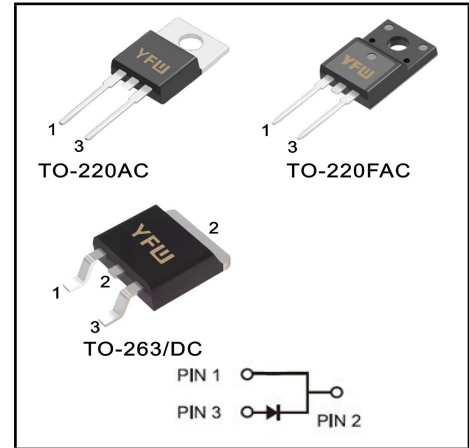
Forward Current - 10 A

FEATURES

- ◆High speed switching capability
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses · High efficiency
- ◆For use in low voltage, high frequency inverters
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: TO-220AC TO-220FAC TO-263/DC
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106



Primary Characteristic

I_o	10A
V_{RRM}	400V
I_{FSM}	160A
V_F	0.95V
$T_J \text{ Max}$	150°C

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

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Maximum RMS voltage	V_{RMS}	280	V
Maximum DC Blocking Voltage	V_{DC}	400	V
Maximum Average Forward Rectified Current	I_o	10	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	I_{FSM}	160	A
Operating Temperature Range	T_J	-40 ~ +150	°C
Storage Temperature Range	T_{STG}	-40 ~ +150	°C
Typical Thermal Resistance (Note1) TO-220AC TO-263/DC TO-220FAC	$R_{\theta JA} / R_{\theta JC}$	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
		Typ	Max	
Forward Voltage Drop(Note2)	V_F	0.91	-	V
at $I_F=3A$				
		TA=125°C		
at $I_F=5A$		TA=25°C		
		TA=125°C		
at $I_F=10A$		TA=25°C	1.08	
	TA=125°C	0.95	-	
Maximum Reverse Current at $V_R=400V$	I_R	0.007	1	uA
		5	-	uA
Maximum Reverse Recovery Time at $I_F=0.5A, I_R=1A, I_{RR}=0.25A$	T_{RR}	-	35	nS

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

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

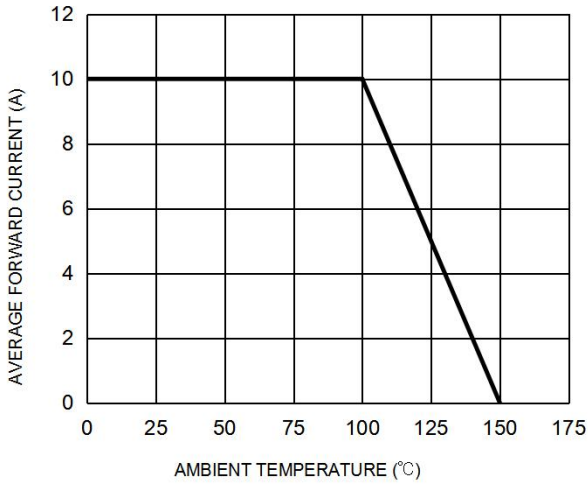


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

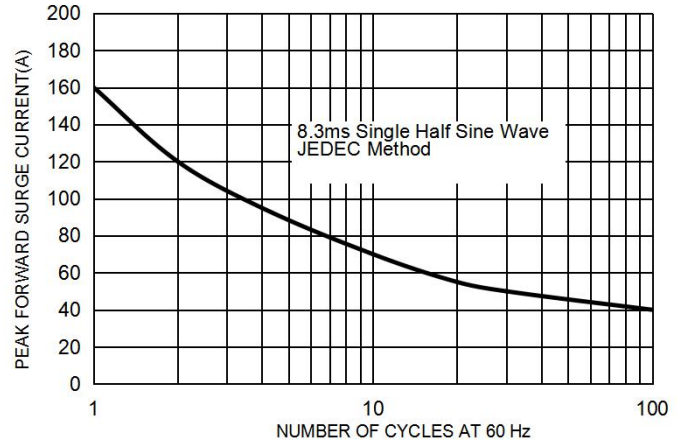


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

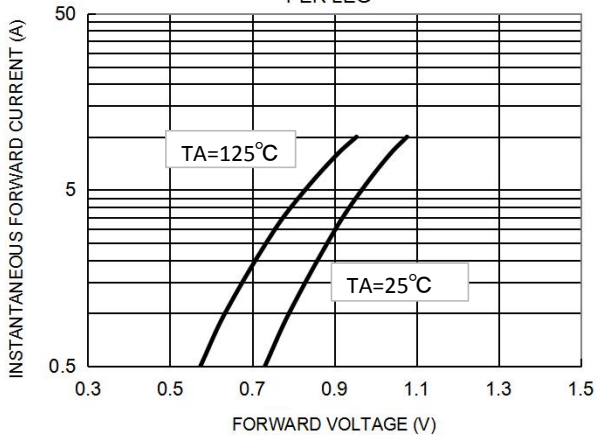
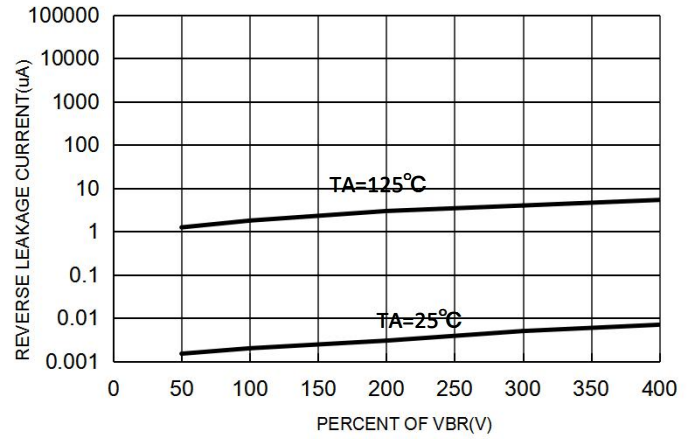
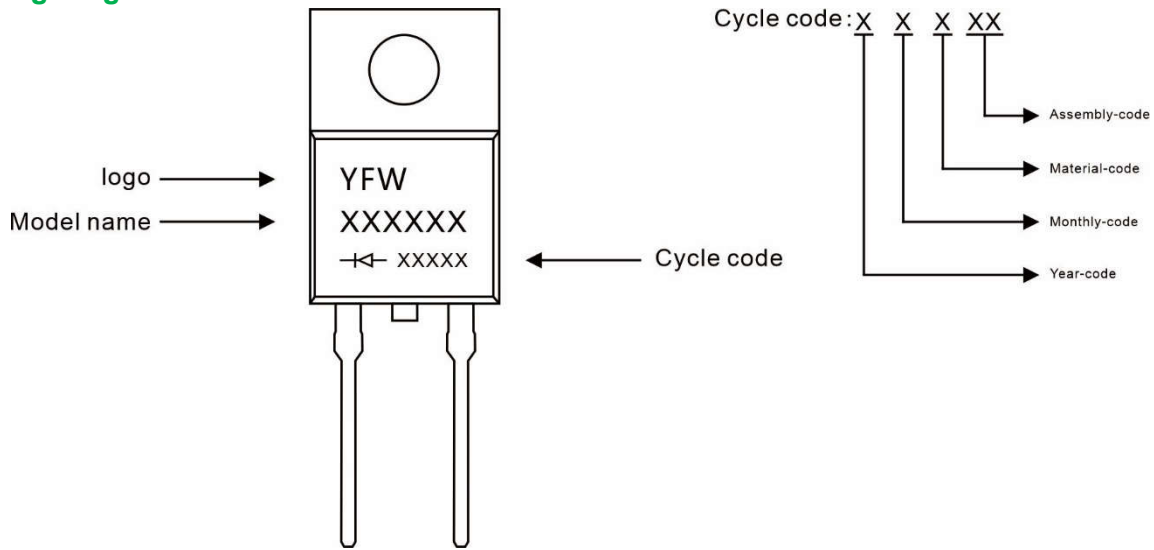


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking Diagram



Ordering information

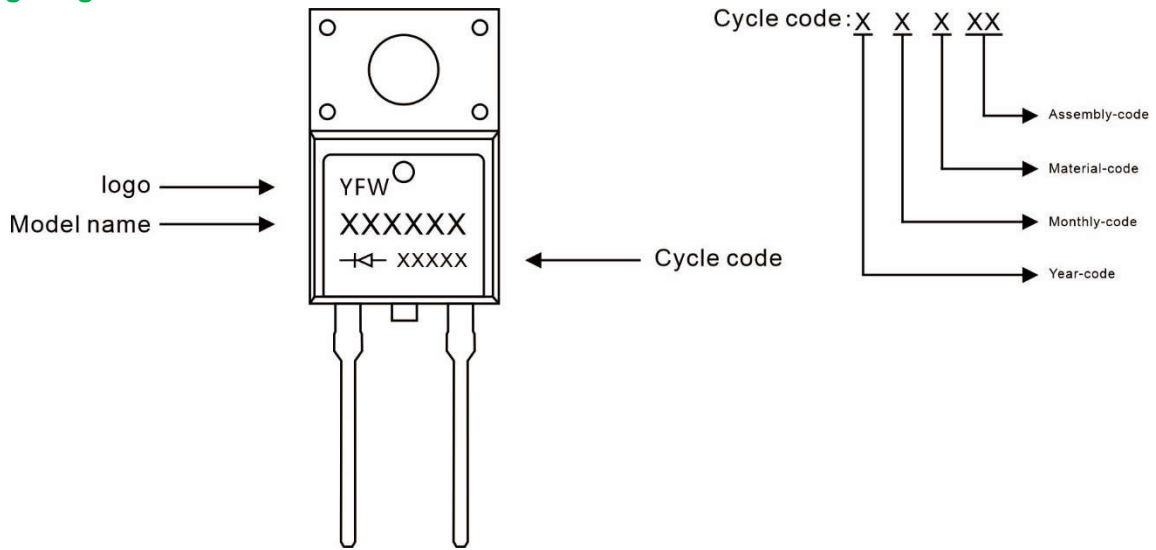
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR1040AC	TO-220AC	0.067oz(1.9g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220AC

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	10.15	10.35	0.400	0.407
B	2.65	2.95	0.104	0.116
C	3.70	3.90	0.146	0.154
D	28.5	29.5	1.12	1.16
E	1.3	1.45	0.051	0.057
F	0.8	1.1	0.031	0.043
G	2.9	3.3	0.114	0.130
H	15.0	16.0	0.591	0.630
I	0.38	0.42	0.015	0.017
J	4.45	4.55	0.175	0.179
K	1.25	1.35	0.049	0.053
L	6.35	6.55	0.250	0.258
M	Typ5.08		Typ0.2	
N	Typ2.54		Typ0.1	
O	0.76	0.84	0.030	0.033
P	3.1	3.3	0.122	0.130

Marking Diagram



Ordering information

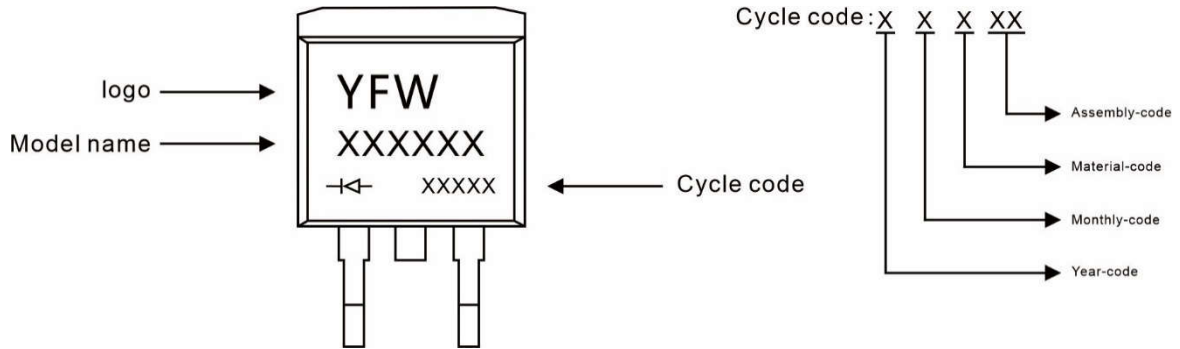
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR1040FAC	TO-220FAC	0.06oz(1.7g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220FAC

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	9.95	10.25	0.392	0.404
B	2.95	3.25	0.116	0.128
C	1.25	1.45	0.049	0.057
E	12.95	13.25	0.51	0.52
F	0.40	0.60	0.016	0.024
G	1.30	1.45	0.051	0.057
H	TYP2.54		TYP 0.1	
I	TYP5.08		TYP 0.2	
J	4.60	4.75	0.181	0.187
K	2.45	2.65	0.097	0.104
L	6.5	6.8	0.256	0.268
M	15.4	16.0	0.606	0.630
N	2.75	3.05	0.108	0.120
O	0.45	0.55	0.018	0.022
P	0.6	0.8	0.024	0.032
Q	0.76	0.84	0.030	0.033

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR1040DC	TO-263	0.04oz(1.16g)	800pcs/reel	1600pcs/box 8000pcs/Carton

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	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
L	15.00	15.30	0.591	0.602
L1	5.20	5.40	0.205	0.213
L2	2.40	2.60	0.094	0.102
L3	1.60	1.80	0.063	0.071

Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.