

**ULTRAFST RECOVERY RECTIFIERS**

**Reverse Voltage -400 V**

**Forward Current - 16 A**

**FEATURES**

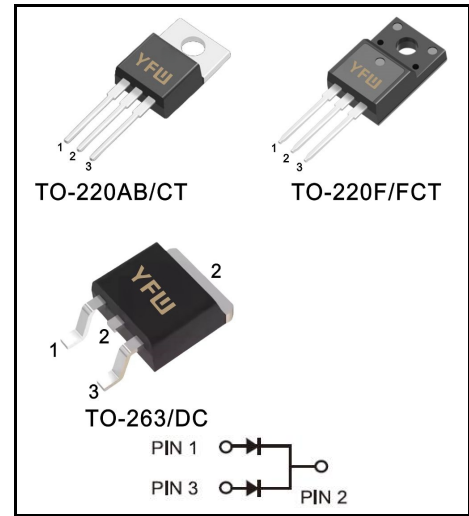
- ◆High speed switching capability
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses · High efficiency
- ◆For use in low voltage, high frequency inverters
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

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

**Primary Characteristic**

<b>I<sub>o</sub></b>	<b>2*8A</b>
<b>V<sub>RRM</sub></b>	<b>400V</b>
<b>I<sub>FSM</sub></b>	<b>120A</b>
<b>V<sub>F</sub></b>	<b>1.1V</b>
<b>T<sub>J</sub> Max</b>	<b>150°C</b>



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

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	<b>V<sub>RRM</sub></b>	400	<b>V</b>
Maximum RMS voltage	<b>V<sub>RMS</sub></b>	280	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	400	<b>V</b>
Maximum Average Forward Rectified Current	Per Leg	8	<b>A</b>
	Total	16	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	<b>I<sub>FSM</sub></b>	120	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-40 ~ +150	<b>°C</b>
Typical Thermal Resistance (Note1) TO-220AB TO-263 TO-220F	<b>R<sub>θJA</sub> R<sub>θJC</sub></b>	2/4	<b>°C/W</b>

**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)	<b>V<sub>F</sub></b>	1.01	-	<b>V</b>	
at IF=3A					TA=25°C
		TA=125°C			
at IF=5A		TA=25°C	1.10		-
		TA=125°C	0.96		-
at IF=8A		TA=25°C	1.20		1.39
	TA=125°C	1.10	-		
Maximum Reverse Current at V <sub>R</sub> =400V	<b>I<sub>R</sub></b>	0.10	1	<b>uA</b>	
		10	-	<b>uA</b>	
Maximum Reverse Recovery Time at IF=0.5A, IR=1A, IRR=0.25A	<b>T<sub>RR</sub></b>	-	35	<b>nS</b>	

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

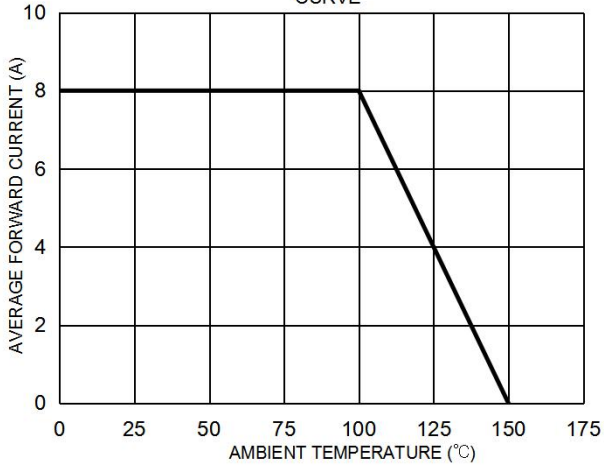


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

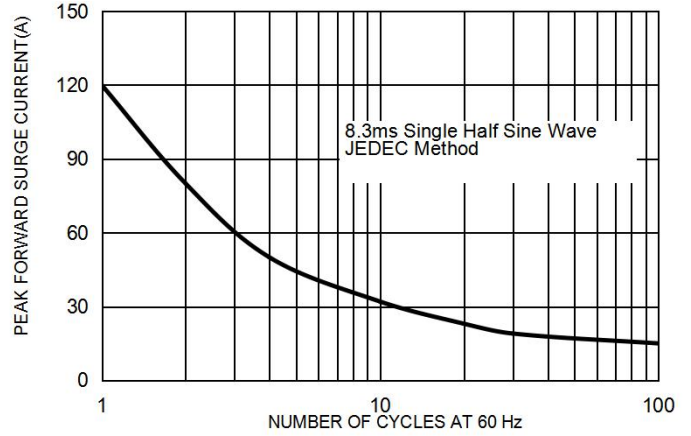


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

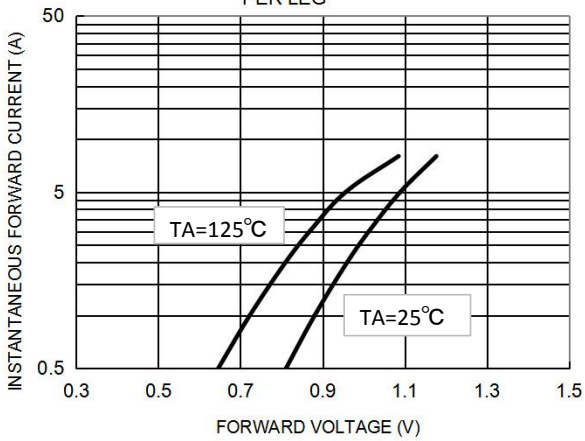
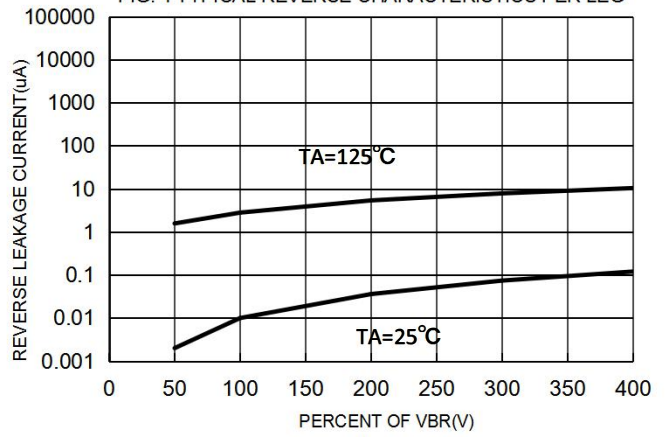
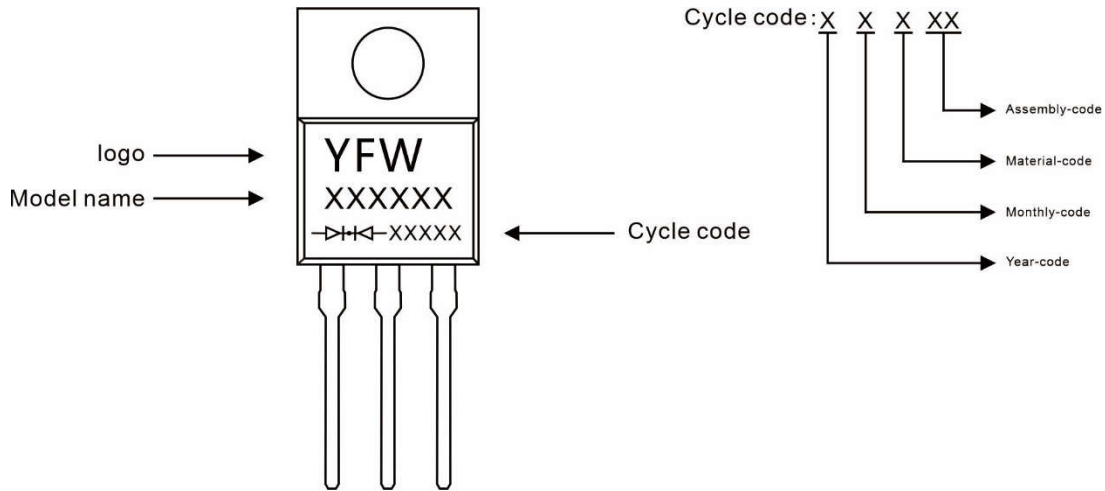


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking Diagram**



**Ordering information**

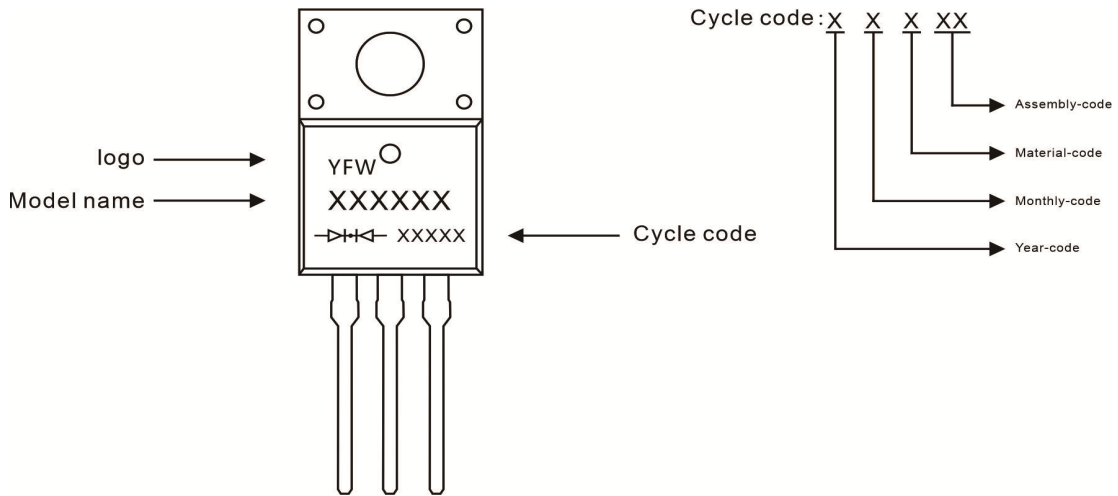
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR1640CT	TO-220AB	0.07oz(1.96g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

**Package Dimensions**

**TO-220AB**

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	2.52	2.82	0.099	0.111
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**

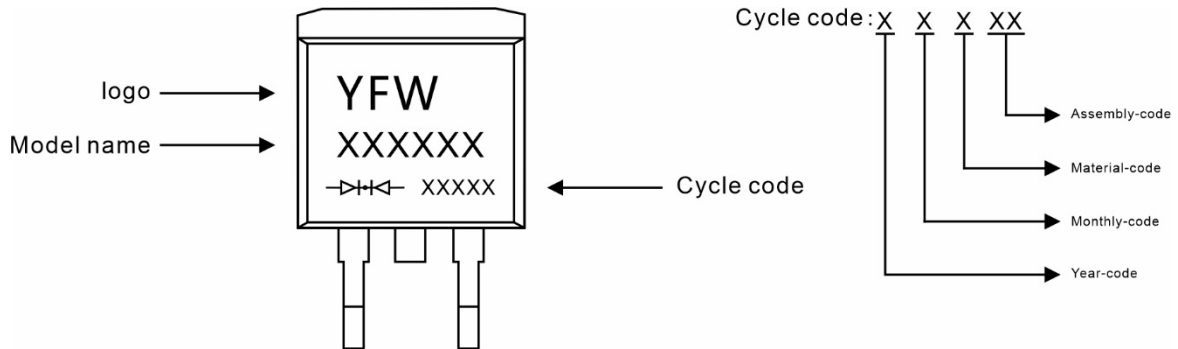
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR1640FCT	TO-220F	0.06oz(1.74g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

**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
MUR1640DC	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

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