

**ULTRAFAST RECOVERY RECTIFIERS**
**Reverse Voltage - 300 V**
**Forward Current - 40 A**
**FEATURES**

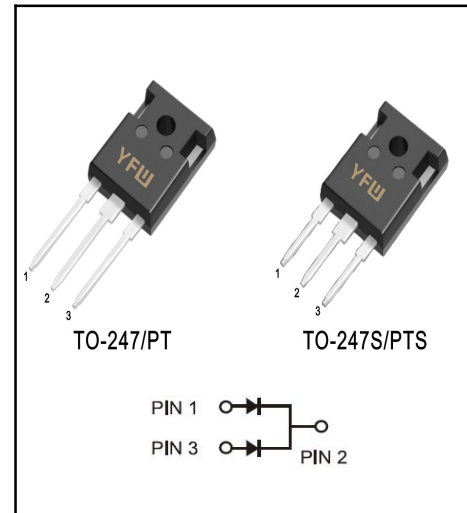
- ◆High speed switching capability
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses, High efficiency
- ◆High reliability
- ◆For use in low voltage, high frequency inverters

**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**

<b>I<sub>o</sub></b>	<b>2*20A</b>
<b>V<sub>RRM</sub></b>	<b>300V</b>
<b>I<sub>FSM</sub></b>	<b>200A</b>
<b>V<sub>F</sub></b>	<b>1.0V</b>
<b>T<sub>J</sub> Max</b>	<b>175°C</b>


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

Characteristics		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	300	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	210	V
Maximum DC Blocking Voltage		V <sub>DC</sub>	300	V
Maximum Average Forward Rectified Current	Per Leg	I <sub>o</sub>	20	A
	Total		40	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)		I <sub>FSM</sub>	200	A
Operating Temperature Range		T <sub>J</sub>	175	°C
Storage Temperature Range		T <sub>STG</sub>	-40 to +175	°C
Typical Thermal Resistance (Note1)		R <sub>θJC</sub>	2	°C/W

**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 <sub>F</sub>	Typ.	Max.	V
at I <sub>F</sub> =10A	TA=25°C		0.85	-	
	TA=125°C		0.67	-	
at I <sub>F</sub> =20A	TA=25°C		0.92	0.96	
	TA=125°C		0.75	-	
Maximum Reverse Current at V <sub>R</sub> =300V	TA=25°C		I <sub>R</sub>	0.2	
	TA=125°C	I <sub>R</sub>	15	-	μA
Maximum Reverse Recovery Time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1A,		T <sub>rr</sub>	-	45	ns

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

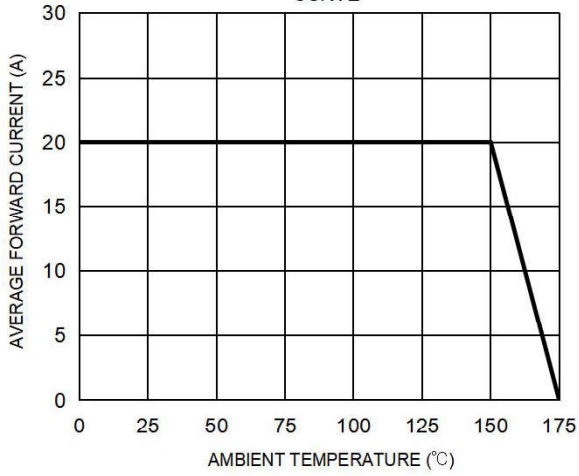


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

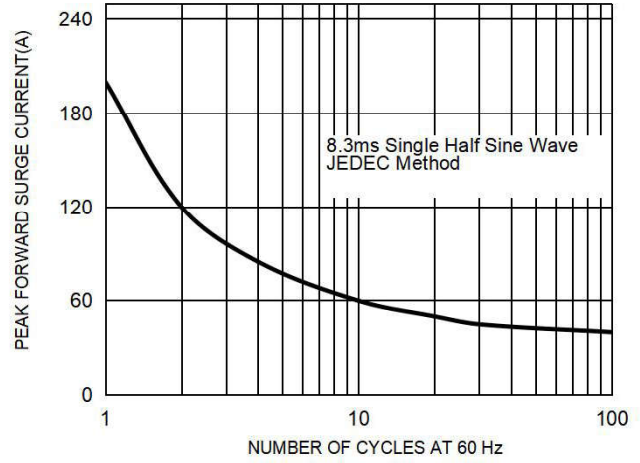


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

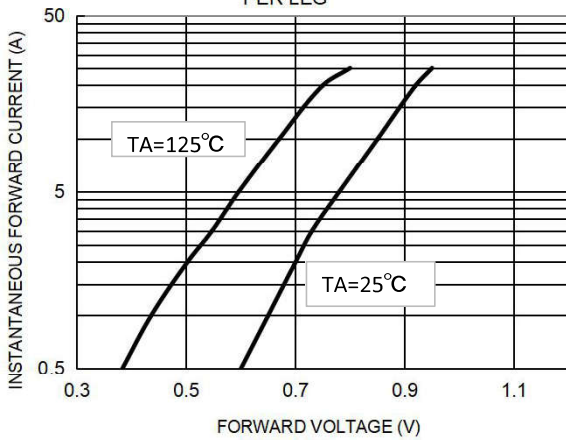
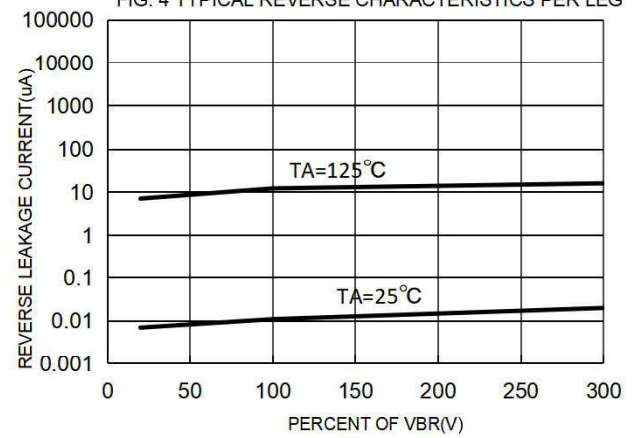
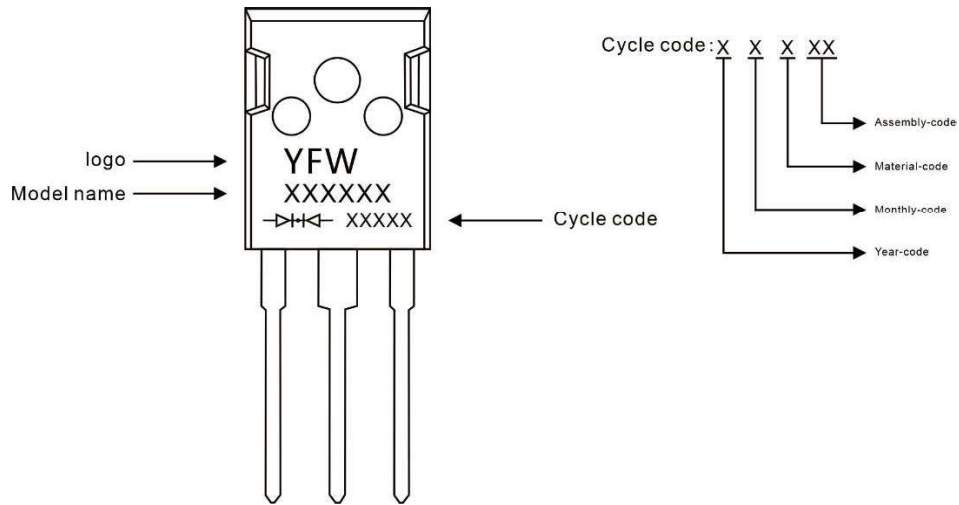


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking Diagram**



**Ordering information**

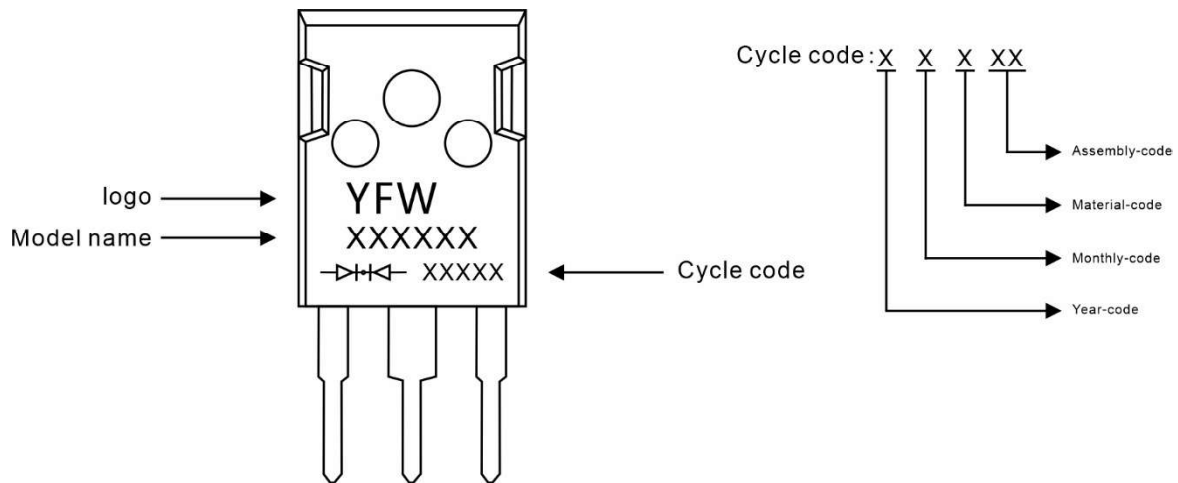
Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR4030PT	TO-247	0.209oz(5.93g)	30pcs/tube	600PCS/Box 2400PCS/Carton

**Package Dimensions**

**TO-247**

Symbol	Dimensions in mm		Dimensions in Inch	
	Min.	Max.	Min.	Max.
A	4.90	5.10	0.193	0.201
A1	1.90	2.10	0.075	0.083
A2	2.29	2.54	0.090	0.100
b	1.00	1.40	0.039	0.055
b1	2.00	2.20	0.079	0.087
b2	3.00	3.20	0.118	0.126
c	0.50	0.70	0.020	0.028
D	15.75	16.05	0.620	0.632
E	20.20	20.80	0.795	0.819
e	5.45 (BSC)		0.215 (BSC)	
e1	10.90 (BSC)		0.429 (BSC)	
F	6.05	6.25	0.238	0.246
F1	5.80	6.00	0.228	0.236
L	20.10	20.40	0.791	0.803
L1	4.05	4.35	0.159	0.171
Φ	3.50	3.70	0.138	0.146

**Marking Diagram**



**Ordering information**

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MUR4030PTS	TO-247S	0.158oz(4.48g)	30pcs/tube	600PCS/Box 2400PCS/Carton

**Package Dimensions**

**TO-247S**

Symbol	Dimensions in mm		Dimensions in Inch	
	Min.	Max.	Min.	Max.
A	15.0	16.0	0.59	0.63
B	19.5	20.5	0.77	0.81
C	33.5	35.5	1.32	1.40
D	5.0	6.0	0.20	0.24
E	3.5	4.5	0.14	0.18
F	2.5	3.5	0.10	0.14
G	1.75	2.5	0.07	0.14
H	3.0	4.0	0.12	0.16
I	9.0	11.0	0.35	0.43
J	4.9	5.1	0.19	0.20
K	1.0	1.3	0.04	0.05
L	3.75	4.25	0.15	0.17
M	4.75	5.25	0.19	0.21
N	1.8	2.2	0.07	0.09
O	0.45	0.6	0.018	0.024
P	5.08		0.2	
Q	1.2	1.3	0.05	0.051

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